NOTICES OF FINAL RULEMAKING

The Administrative Procedure Act requires the publication of the final rules of the state's agencies. Final rules are those which have appeared in the *Register* first as proposed rules and have been through the formal rulemaking process including approval by the Governor's Regulatory Review Council or the Attorney General. The Secretary of State shall publish the notice along with the Preamble and the full text in the next available issue of the *Register* after the final rules have been submitted for filing and publication.

NOTICE OF FINAL RULEMAKING

TITLE 2. ADMINISTRATION

CHAPTER 8. STATE RETIREMENT SYSTEM BOARD

[R06-472]

PREAMBLE

<u>1.</u>	Sections Affected	Rulemaking Action
	Article 7	New Article
	R2-8-701	New Section
	R2-8-702	New Section
	R2-8-703	New Section
	R2-8-704	New Section
	R2-8-705	New Section
	R2-8-706	New Section
	R2-8-707	New Section
	R2-8-708	New Section
	R2-8-709	New Section

2. The specific authority for the rulemaking, including both the authorizing statute (general) and the statutes the rules are implementing (specific):

Authorizing statute: A.R.S. § 38-714(F)(5)

Implementing statute: A.R.S. §§ 38-735, 38-736, 38-737, 38-738

3. The effective date of the rules:

December 5, 2006

These rules become effective upon filing with the Secretary of State. This immediate effective date is allowed under A.R.S. § 41-1032(A)(4), which allows a rule to become effective immediately when it provides a benefit to the public and a penalty is not associated with a violation of the rule. It is a benefit to the public to have current, up-to-date rules that provide current procedures for identifying contributions not withheld. These rules do not impose any additional requirements upon the public, and there is no penalty associated with the violation of the rules.

4. A list of all previous notices appearing in the Register addressing the final rules:

Notice of Rulemaking Docket Opening: 11 A.A.R. 3255, August 26, 2005; 12 A.A.R. 836, March 17, 2006

Notice of Proposed Rulemaking: 12 A.A.R. 2802, August 11, 2006

5. The name and address of agency personnel with whom persons may communicate regarding the rules:

Name: Nancy O. Johnson, Rules Coordinator

Address: Arizona State Retirement System

3300 N. Central, 14th Fl. Phoenix, AZ 85012

Telephone: (602) 308-5172 Fax: (602) 264-6113

E-mail: nancyj@azasrs.gov

or

Name: Patrick M. Klein, Assistant Director, External Affairs

Arizona State Retirement System

Notices of Final Rulemaking

Address: 3300 N. Central Ave., 14th Fl.

Phoenix, AZ 85012

Telephone: (602) 240-2044
Fax: (602) 240-5303
E-mail: patk@azasrs.gov

6. An explanation of the rules, including the agency's reasons for initiating the rules:

A.R.S. § 38-736 provides when member contributions are to begin. A.R.S. §§ 38-736 and 38-737 provide how employer and member contributions are paid. A.R.S. § 38-735 provides when interest is charged on contributions, and A.R.S. § 38-738 identifies what happens if less than the correct amount of employer or member contributions are made. This rulemaking specifies how the ASRS handles claims that required contributions were not withheld, including the procedure for:

- 1. Notifying ASRS that less than the correct amount of contributions may have been paid into ASRS by an employer,
- 2. Determining whether less than the correct amount of contributions has been paid into ASRS by an employer,
- 3. Determining the amount of contributions that shall be paid into the ASRS,
- 4. Disputing ASRS determinations involving contributions not withheld, and
- 5. Specifying how the contributions shall be paid into ASRS.
- 7. A reference to any study relevant to the rules that the agency reviewed and either relied on in its evaluation of or justification for the rules or did not rely on in its evaluation of or justification for the rules, where the public may obtain or review each study, all data underlying each study, and any analysis of each study and other supporting material:

The agency did not review any study relevant to the rules.

8. A showing of good cause why the rules are necessary to promote a statewide interest if the rules will diminish a previous grant authority of a political subdivision of this state:

Not applicable

9. The summary of the economic, small business, and consumer impact:

Annual costs/revenues changes are designated as minimal when less than \$1,000, moderate from \$1,000 to \$10,000, and substantial when more than \$10,000 in additional costs or revenues.

The ASRS will bear moderate to substantial costs for promulgating and enforcing the rules. Costs for promulgating the rules include staff time to write, review, and direct the rules through the rulemaking process.

The cost to an ASRS employer and to a member will depend on the number of incidences where required contributions were not withheld, the salary of the member involved, the length of time involved, how long it's been since the contributions should have been withheld, and how long the employer and member take to pay the contribution amount. However, these costs are accrued based on statutory requirements. During fiscal year 2006, 1,750 Contributions Not Withheld claims were processed. None of the final decisions were appealed. The rules benefit both the employers and the members because the rules provide a consistent process for identifying and paying for contributions that should have been previously withheld, but were not.

10. A description of the changes between the proposed rules, including supplemental notices, and final rules (if applicable):

- 1. The title of R2-8-708 in the table of contents was changed from "Dispute of Credited Service" to "Dispute of an ASRS Determination Regarding Contributions Not Withheld" to make it consistent with the title in the rule. The title in the rule is a clearer description of the contents of the rule, and is not a substantial change.
- 2. In R2-8-702(A) the rule identified as R2-8-703(A)(1) was changed to R2-8-704(A)(1). The number "3" in the citations was a typographical error, and is not a substantial change.
- 3. In R2-8-706(B), the citation "A.R.S. § 38-748" was removed because the statute was repealed, and the citation "A.R.S. § 38-766" was changed to "A.R.S. § 38-766.01" because of a typographical error. These are not substantial changes.
- 4. Minor technical and grammatical changes were made at the suggestion of G.R.R.C. staff.

11. A summary of the comments made regarding the rules and the agency response to them:

None

12. Any other matters prescribed by statute that are applicable to the specific agency or to any specific rule or class of rules:

Not applicable

13. Incorporations by reference and their location in the rules:

Not applicable

14. Were these rules previously made as emergency rules?

No

15. The full text of the rules follows:

TITLE 2. ADMINISTRATION

CHAPTER 8. STATE RETIREMENT SYSTEM BOARD ARTICLE 7. CONTRIBUTIONS NOT WITHHELD

Section	
R2-8-701.	<u>Definitions</u>
R2-8-702.	General Information
R2-8-703.	ASRS Employer's Discovery of Error
R2-8-704.	Member's Discovery of Error
R2-8-705.	ASRS' Discovery of Error
R2-8-706.	<u>Determination of Contributions Not Withheld</u>
R2-8-707.	Submission of Payment
R2-8-708.	Dispute of an ASRS Determination Regarding Contributions Not Withhele
R2-8-709.	Nonpayment of Contributions

ARTICLE 7. CONTRIBUTIONS NOT WITHHELD

R2-8-701. Definitions

The following definitions apply to this Article unless otherwise specified:

- 1. "218 agreement" means a written agreement between the State, political subdivision, or political subdivision entity and the Social Security Administration, under the provisions of § 218 of the Social Security Act, to provide Social Security and Medicare or Medicare-only coverage to employees of the State, political subdivision, or political subdivision entity.
- 2. "Active member" has the same meaning as in A.R.S. § 38-711.
- 3. "ASRS" has the same meaning as in A.R.S. § 38-711.
- 4. "ASRS employer" means this state, a political subdivision, or a political subdivision entity that has:
 - a. Signed a 218 agreement,
 - b. Applied to become a member of ASRS, and
 - c. Been approved for membership by the Board.
- 5. "Authorized employer representative" means an individual who has legal power to bind the ASRS employer in its transactions with the ASRS.
- 6. "Board" has the same meaning as in A.R.S. § 38-711.
- 7. "Director" means the Director appointed by the Board as provided in A.R.S. § 38-715.
- 8. "Documentation" means a pay stub, completed W-2 form, completed Verification of Contributions Not Withheld form, employer letter or spreadsheet, completed State Personnel Action Form, Social Security Earnings Report, employment contract, payroll record, timesheet, or other ASRS employer-provided form that includes:
 - <u>a.</u> Whether the employee was covered under the ASRS employer's 218 agreement,
 - b. The number of hours worked or length of time the member was employed by the ASRS employer, or
 - c. The compensation paid to the member by the ASRS employer.
- 9. "Eligible service" means employment with an ASRS employer:
 - a. That is no more than 15 years before the date the ASRS receives written credible evidence that less than the correct amount of contributions were paid into the ASRS or the ASRS otherwise determines that less than the correct amount of contributions were made as specified in A.R.S. § 38-738(C); and
 - b. <u>In which the member:</u>
 - i. Until 6/30/92, worked a minimum of 20 hours per week for at least 5 months in a fiscal year for any one or more ASRS employers;
 - ii. From 7/1/92 to 7/1/99, worked a minimum of 20 hours per week for at least 20 weeks in a fiscal year for any one or more ASRS employers; or
 - iii. From 7/1/99 to the present, worked a minimum of 20 hours per week for at least 20 weeks in a service year for at least one ASRS employer.
- 10. "Fiscal year" means from July 1 of one year through June 30 of the next year.
- 11 "Member" has the same meaning as in A.R.S. § 38-711.

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- 12. "Person" has the same meaning as in A.R.S. § 1-215.
- 13. "Political subdivision" has the same meaning as in A.R.S. § 38-711.
 14. "Political subdivision entity" has the same meaning as in A.R.S. § 38-711.
- 15. "Service year" has the same meaning as in A.R.S. § 38-711.

R2-8-702. **General Information**

- A. Verified eligible service that occurred more than 15 years before the date ASRS receives the information identified in R2-8-704(A)(1) is considered public service credit as provided in A.R.S. § 38-738(D), and is not applied under this Article.
- B. The ASRS employer shall pay the ASRS employer's portion of the contributions the ASRS determines is owed under R2-8-706 whether or not:
 - The member has withdrawn contributions as specified in R2-8-115; or
 - The member pays the member's portion of the contributions.
- C. The person who initiates the claim that contributions were not withheld for eligible service has the burden to prove a contribution error was made.
- **D.** ASRS shall not waive payment of contributions or interest owed under this Article.
- E. If a member is not able to establish eligibility for service credit for which contributions were not withheld, but is able to establish a period of employment by an ASRS employer the member may request to purchase service credit for that period under A.R.S. § 38-743 and Article 5 of this Chapter.

R2-8-703. ASRS Employer's Discovery of Error

If an ASRS employer determines that contributions have not been withheld for a member for a period of eligible service, the ASRS employer shall notify ASRS in writing, and shall provide ASRS with the member's full name, Social Security number, months, years, and hours per week worked, the compensation each fiscal year for the time periods worked, and the member's position title and status at the time contributions should have been withheld.

R2-8-704. Member's Discovery of Error

- A. If a member believes that an ASRS employer has not withheld contributions for the member for a period of eligible service, the member shall:
 - 1. Provide the ASRS employer with documentation of the member's claim and request that the ASRS employer provide a letter that includes the information in the Verification of Contributions Not Withheld form or complete a Verification of Contributions Not Withheld form that includes:
 - The member's full name;
 - Other names used by the member;
 - The member's Social Security number;
 - Whether the position was covered under the ASRS employer's 218 agreement;
 - The position title the member held at the time the contributions should have been withheld;
 - The eligibility of the member at the time the contributions should have been withheld;
 - g. The following statements of understanding and agreements to be initialed by the authorized employer representative filling out the form:
 - I understand it is my responsibility to verify the accuracy of the information I am providing on this form. I understand any individual who knowingly makes a false statement, or who falsifies or permits to be falsified any record of the ASRS with an intent to defraud the ASRS, is guilty of a Class 6 felony pursuant to A.R.S. § 38-793; and
 - ii. I understand that, based on the information provided on this form, the ASRS may determine that contributions are owed on behalf of the member listed on this form, and the ASRS employer may incur a substantial financial obligation;
 - The months worked, the hours per week worked, and the compensation earned by the member, by fiscal year;
 - The name of the ASRS employer;
 - The printed name and signature of the authorized employer representative;
 - The daytime telephone number of the authorized employer representative;
 - The title of the authorized employer representative; and
 - m. The date the authorized employer representative signed the form;
 - Provide the ASRS with the completed Verification of Contributions Not Withheld form; and
 - 3. If the ASRS employer refuses to fill out the Verification of Contributions Not Withheld form, or if the member disputes the information the ASRS employer completes on the form, provide the ASRS with the documentation the member believes supports the allegation that contributions should have been withheld, that includes proof:
 - That the employee was covered under the ASRS employer's 218 agreement,
 - b. Of the number of hours worked,
 - c. Of the length of time the member was employed by the ASRS employer, and
 - d. Of the compensation paid to the member by the ASRS employer.

R2-8-705. ASRS' Discovery of Error

If the ASRS determines, as specified in A.R.S. § 38-738(B)(7), that contributions have not been withheld for a member for a period of eligible service, the ASRS shall notify the member and the ASRS employer in writing and shall request the following information:

- 1. The months, years and hours per week worked,
- 2. The compensation earned by the member each fiscal year for the time periods worked; and
- 3. The member's position title at the time contributions should have been withheld.

R2-8-706. Determination of Contributions Not Withheld

- A. Upon receipt of the information listed in R2-8-703, R2-8-704, or R2-8-705, the ASRS shall review the information to determine whether or not member contributions should have been withheld by the ASRS employer, the length of time those contributions should have been withheld, and the amount of contributions that should have been withheld.
- **B.** Except for returning to work under A.R.S. § 38-766.01, the presence of a contract between a member and the ASRS employer does not alter the contribution requirements of A.R.S. §§ 38-736 and 38-737.
- C. If there is any discrepancy between the documentation provided by the ASRS employer and the documentation provided by the member, a document used in the usual course of business prepared at the time in question is controlling.
- **D.** The ASRS shall provide to the ASRS employer and the member a written statement that includes:
 - 1. The dates of eligible service for which contributions were not withheld,
 - 2. The dollar amount of contributions that should have been made,
 - 3. The dollar amount of the contributions to be paid by the ASRS employer,
 - 4. The interest on the ASRS employer contributions and member contributions to be paid by the ASRS employer.
 - 5. The dollar amount of contributions to be paid by the member, and
 - 6. To the member, the various payment options that may apply, as specified in R2-8-512 through R2-8-519.

R2-8-707. Submission of Payment

- A. Within 90 calendar days after the ASRS notifies the ASRS employer in writing of the amount due, the ASRS employer shall pay all ASRS employer contributions, including accrued interest on both the ASRS employer and member contributions, from the date the contributions were due to the date the ASRS notifies the ASRS employer of the amount due. An ASRS employer who makes payment under A.R.S. § 38-738(B)(3) is not liable for additional interest that may accrue as a result of a member's failure to remit payment required by A.R.S. § 38-738(B)(1). If the ASRS does not receive full payment of the ASRS employer's amount due within 90 calendar days after the ASRS notifies the ASRS employer of the amount due, interest on the amount not paid, as provided in A.R.S. § 38-738(B)(3), will accrue from the 91st day until the ASRS employer pays the full amount.
- **B.** An ASRS employer may pay the amount the ASRS employer believes may be due at any time before ASRS's notification of the amount due in order to prevent the accrual of interest after the date of the payment. Any amount the ASRS employer pays that the ASRS determines is not owed shall be refunded to the ASRS employer.
- C. A member may purchase eligible service for which contributions were not withheld in accordance with the requirements of Article 5 of this Chapter for purchase of service credit. If the ASRS does not receive full payment of the ASRS employee's amount due within 90 calendar days after the ASRS notifies the member that the ASRS received the ASRS employer's full payment, interest on the amount not paid, as provided in A.R.S. § 38-738(B)(1), will accrue from the 91st day until the member pays the full amount.

R2-8-708. Dispute of an ASRS Determination Regarding Contributions Not Withheld

- A. If a member or the ASRS employer disputes an ASRS determination regarding contributions not withheld, that party may request in writing that the Director review the ASRS determination. Within 30 calendar days of receiving the request for the review of the ASRS determination, the Director shall review and either approve or amend the ASRS determination, and send to the member and the ASRS employer written notice of the Director's decision.
- **B.** If the member or the ASRS employer disputes the Director's decision, that party may obtain a hearing by filing a Request for a Hearing with the Board, in accordance with Article 4 of this Chapter, within 30 calendar days after receiving notice of the Director's determination. The party filing the request shall provide the name of the other party.
- C. The burden of producing evidence is on the party challenging the determination.
- **D.** If the ASRS Board determines that the service is eligible, the ASRS shall send both the ASRS employer and the member a written statement, as specified in R2-8-706(D), and the:
 - 1. Decision of the Board;
 - 2. Correct amount due as determined by the Board, if applicable;
 - 3. Additional amount of interest due from the losing party, from the 91st day after the initial notification of the amount due to the date of the decision; and
 - 4. Notification that interest shall continue to accrue on the total amount due at the rate specified in A.R.S. § 38-738(B) until the date payment is received by the ASRS.
- E. If the ASRS Board determines that the service is not eligible, ASRS shall send both the ASRS employer and the member the decision of the Board.

R2-8-709. Nonpayment of Contributions

- A. A member receives service credit only for the portion of service the ASRS has determined is eligible and that the member has paid for.
- **B.** A member does not receive service credit until both the ASRS employer and member portions of the contributions have been paid.
- C. If the ASRS employer does not pay, the ASRS shall take any steps legally authorized to collect payment. Any steps the ASRS may take to collect payment are separate from any action a member may elect to take against the ASRS employer.

NOTICE OF FINAL RULEMAKING

TITLE 9. HEALTH SERVICES

CHAPTER 14. DEPARTMENT OF HEALTH SERVICES LABORATORIES

[R06-481]

PREAMBLE

<u>1.</u>	Sections Affected	Rulemaking Action
	R9-14-601	Amend
	R9-14-602	Amend
	R9-14-603	Amend
	R9-14-604	Repeal
	R9-14-604	New Section
	R9-14-605	Amend
	R9-14-606	Amend
	R9-14-607	Amend
	R9-14-608	Amend
	R9-14-609	Amend
	R9-14-610	Amend
	R9-14-611	Amend
	R9-14-612	Amend
	R9-14-613	Amend
	R9-14-614	Amend
	R9-14-615	Amend
	R9-14-616	Amend
	R9-14-617	Amend
	R9-14-618	Amend
	R9-14-619	Amend
	R9-14-620	Renumber
	R9-14-620	New Section
	R9-14-621	Renumber
	R9-14-621	Amend
	Table 1	Amend
	Exhibit I	New Exhibit
	Exhibit II	New Exhibit

2. Statutory authority for the rulemaking, including both the authorizing statutes (general) and the statutes the rules are implementing (specific):

Authorizing statutes: A.R.S. §§ 36-136(F) and 36-495.13

 $Implementing \ statutes: A.R.S. \$\$ \ 36-495.01 \ through \ 36-495.03, \ 36-495.05 \ through \ 36-495.09, \ 36-495.14, \ 36-495.15, \ 41-1001, \ 41-1055, \ and \ 41-1073 \ through \ 41-1076$

3. The effective date of the rules:

December 5, 2006

The rules will become effective immediately upon filing with the Office of the Secretary of State after approval by the Governor's Regulatory Review Council (G.R.R.C.). ADHS is requesting an immediate effective date for this rulemaking, as authorized under A.R.S. § 41-1032(A)(1) and (2), because the rule revisions are necessary to preserve the public health and safety and to avoid a violation of federal law or regulation. The need for an immediate effective date is not created due to ADHS's delay or inaction.

The overriding mission and goal of ADHS in its Environmental Laboratory Licensing Program is to assure the public's access to clean and safe drinking water, an environment safe from contaminants in air and soil, and proper treatment of wastewater. Licensing and regulating the laboratories that provide compliance testing is essential to protecting the public health and safety because the information provided to the public about the safety of its drinking water, air, soil, and treated wastewater is based upon the test results produced in those laboratories. Because ADHS is required to sustain the Environmental Laboratory Licensing Program through the fees charged, and the current Program expenses exceed current fee revenues, it is essential that fee revenues be increased as soon as possible so that ADHS can continue to provide this essential service to the public.

In addition, many of the changes in this rulemaking are being made as a result of input from the U.S. Environmental Protection Agency (EPA) and the Arizona Department of Environmental Quality (ADEQ) and are essential to allow the State of Arizona to maintain primacy for safe drinking water in Arizona. The Safe Drinking Water Act gives EPA the responsibility for establishing national drinking water standards to protect the health of individuals who obtain their drinking water through public water systems. 40 CFR Part 142 allows a state to obtain primary authority to regulate (primacy) in the area of safe drinking water if the state establishes drinking water regulations that are no less stringent than the national primary drinking water regulations in effect under 40 CFR Part 141. One of the requirements for primacy is that the state establish and maintain a state program for the certification of laboratories conducting analytical measurements of drinking water contaminants pursuant to the requirements of the state's primary drinking water regulations. Because ADHS has statutory authority to license environmental laboratories that perform compliance testing, and ADEQ has statutory authority for the other components of Arizona's primary drinking water regulations, ADEQ and ADHS essentially share primacy for safe drinking water in Arizona. Provisions in the ADHS rules that are currently less stringent than the national primary drinking water regulations are impeding Arizona's ability to maintain this primacy. ADHS has had numerous communications with both EPA and ADEQ regarding this issue, and the shortcomings were described in the five-year-review report for these rules that was approved by G.R.R.C. in May 2006. It is essential that these provisions be revised as soon as possible so that Arizona (through ADEQ and ADHS) can maintain primacy for safe drinking water in Arizona.

4. A list of all previous notices appearing in the Register addressing the final rule:

Notice of Rulemaking Docket Opening: 12 A.A.R. 228, January 27, 2006

Notice of Proposed Rulemaking: 12 A.A.R. 3274, September 15, 2006

5. The name and address of agency personnel with whom persons may communicate regarding the rulemaking:

Name: Steve Baker, Office Chief

Address: Arizona Department of Health Services

Office of Laboratory Services

250 N. 17th Ave. Phoenix, AZ 85007

Telephone: (602) 364-0735 Fax: (602) 364-0759

E-mail: bakersd@azdhs.gov

or

Name: Kathleen Phillips, Rules Administrator

Address: Arizona Department of Health Services

Office of Administrative Rules 1740 W. Adams St., Suite 202

Phoenix, AZ 85007

Telephone: (602) 542-1264
Fax: (602) 364-1150
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6. An explanation of the rule, including the agency's reasons for initiating the rule:

a. Purpose of this rulemaking

The rules in 9 A.A.C. 14, Article 6 implement the statutes in A.R.S. Title 36, Chapter 4.3 by establishing application and fee requirements and the process for licensing environmental laboratories; minimum standards of proficiency, methodology, quality assurance, operation, and safety for environmental laboratories; minimum standards for laboratory records and reports; specific requirements for mobile laboratories and out-of-state laboratories; and time-frames.

This rulemaking updates the rules for environmental laboratory licensure to bring them into compliance with federal regulations and current standards of practice. The rulemaking also reorganizes the fee structure; revises the fee assessment process; increases fees; clarifies the rules; and addresses the issues identified in the five-year-review report on the rules, which was approved by G.R.R.C. in May 2006.

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The rulemaking increases the fees for environmental laboratory licensing so that the fees will again be sufficient to sustain the Environmental Laboratory Licensing Program. The Environmental Laboratory Licensing Program is supported entirely by the environmental laboratory licensure revolving fund created under A.R.S. § 36-495.15.

It is essential that ADHS increase the fees because the Program has been operating at a deficit since FY2005. The deficit for FY2006 was \$148,718, and the projected deficit for FY2007 in the absence of a fee increase would be approximately \$156,140. The Program has been able to sustain itself thus far by using the surplus in the environmental laboratory licensure revolving fund. However, the fund currently contains only \$320,659, enough to sustain the Program for approximately two more years at the current deficit level.

b. Process for this rulemaking

ADHS formed an Environmental Laboratories Rulemaking Work Group (Work Group) to review and provide ADHS with input on the draft revisions for this rulemaking. The Work Group met on May 10, July 12, and July 25 and considered three different versions of the draft rules. Through those meetings, ADHS and the Work Group were able to reach consensus on the contents of the draft rules.

On July 27, ADHS presented Revision 2 of the draft rules for consideration at the Environmental Laboratory Advisory Committee (ELAC) meeting, along with a list of changes that had been identified for Revision 3 of the draft rules. After recommending several additional changes, ELAC unanimously recommended that ADHS go forward with Revision 2, as revised by the list of changes identified for Revision 3 and the additional changes identified during the ELAC meeting. ADHS created this Notice of Proposed Rulemaking using Revision 3, with only four additional minor changes—three made to clarify language and one to put definitions in alphabetical order.

7. A reference to any study relevant to the rule that the agency reviewed and either relied on or did not rely on in its evaluation of or justification for the rule, where the public may obtain or review each study, all data underlying each study, and any analysis of each study and other supporting material:

ADHS did not review any study relevant to the rules.

8. A showing of good cause why the rule is necessary to promote a statewide interest if the rule will diminish a previous grant of authority of a political subdivision of this state:

Not applicable

9. The summary of the economic, small business, and consumer impact:

As used in this summary, "minimal" means less than \$1,000; "moderate" means \$1,000 to \$9,999; "substantial" means \$10,000 or more; and "significant" means meaningful or important, but not readily subject to quantification. This summary describes only the most noteworthy economic impacts expected to result from this rulemaking.

ADHS believes that the costs of this rulemaking will be borne by ADHS, environmental laboratory licensees (licensees), and applicants for environmental laboratory licensure (applicants). ADHS believes that the benefits from this rulemaking will be enjoyed by ADHS, the Arizona Department of Environmental Quality (ADEQ), licensees, applicants, laboratory clients (clients), and the public.

In R9-14-602, ADHS exempts from licensing each out-of-state laboratory at which only microbiology testing of bottled water is performed and for which the owner holds a current and valid environmental laboratory license or certificate, issued by another state of the United States, that specifically authorizes drinking water testing. This will result in a moderate-to-substantial benefit to each licensee whose laboratory qualifies for the exemption because licensure will no longer be required. ADHS believes that this exemption will not be detrimental to public health because the U.S. Food and Drug Administration regulates the safety of bottled drinking water as a food product and because requiring a licensee to have a current and valid environmental laboratory license issued by another state helps to ensure that the microbiology testing done by the licensee to monitor compliance with the federal standards is appropriate and scientifically valid.

In R9-14-603, ADHS eliminates the installment payment option for a small business applicant for an initial license. This may result in a significant cost to a small business applicant that desired to use the installment payment option, because it will no longer be possible to spread fee payment over the entire year for an initial license. However, the impact should be mitigated somewhat because the option will still be available upon renewal. This will result in a significant benefit to ADHS because ADHS has experienced problems with receiving timely installment payments and believes that compliance will improve if installment payment is only available upon renewal.

ADHS is also revising R9-14-603 to require an applicant to pay all of the fees required under R9-14-607 and R9-14-608 along with an application. Although this will not actually result in an increased cost to an applicant, it is a significant change in that there will no longer be the delay in payment of these fees resulting from the ADHS billing process. Thus, each applicant will need to make any business adjustments necessary to ensure that the funds are available at the time of application rather than more than a month thereafter. This will result in a significant benefit to ADHS because ADHS will no longer need to administer a billing process as a step in licensing, with the costs related to that process, and will be better positioned to implement online application for a license, per the state's e-licensing initiative headed by the Government Information Technology Agency, when the time comes.

In R9-14-605, ADHS eliminates the requirement for ADHS to inspect a laboratory as part of the substantive review period for an initial license, instead making it discretionary, and prescribes factors for ADHS to consider in determin-

ing whether to conduct an annual laboratory inspection. This will result in a significant benefit to ADHS because it makes the rule consistent with A.R.S. § 36-495.07(A) and allows ADHS not to conduct an initial licensing inspection if ADHS determines that an initial licensing inspection is unnecessary for a laboratory. This will also result in a substantial benefit to ADHS because ADHS will not need to hire the additional 1.6 FTE auditors necessary to complete annual laboratory inspections on a 12-month cycle. ADHS is currently completing these inspections on approximately an 18-month cycle. The cost savings is approximately \$104,000 per year. In addition, ADHS will receive a moderate benefit from the reduced staff time spent arranging out-of-state travel and processing out-of-state travel expense billing for annual inspections and a potentially moderate benefit from the reduction in-state travel costs (which are not reimbursed by licensees). This will also result in a minimal-to-moderate benefit to each laboratory at which an annual inspection is not conducted, because of the personnel time savings from not participating in the annual inspection and, for out-of-state laboratories, the cost savings from not being required to reimburse ADHS for the actual expenses incurred by ADHS as a result of the laboratory's location.

It should be noted that, to comply with EPA requirements, the rule requires ADHS to conduct a laboratory inspection at least every three years for each laboratory at which drinking water compliance testing is performed.

In this rulemaking, ADHS moves all of the method and instrumentation fees from R9-14-607 and compiles them in Exhibit I, which also contains the complete listing of approved methods. ADHS also revises the fee structure by eliminating all of the combined method fees and increases the adjusted fees by 29% overall. Eliminating the combined method fees will result in a minimal cost to each licensee. To minimize the impact of eliminating the combined fees, ADHS revised the individual method fees so that the overall increase resulting solely from eliminating the combined fees was only approximately \$5,742 (or approximately 1%). Eliminating the combined fees will result in a significant benefit to ADHS, licensees, and applicants because it makes the fee structure more equitable across the board and makes the actual fees owed very clear. ADHS will also receive a moderate benefit from the approximately \$5,742 increase in annual fees. As a result of increasing fees by 29%, ADHS will receive approximately \$55,860 in increased application fees and approximately \$102,595 in increased method and instrumentation fees each year (including the \$5,742). In addition to benefiting ADHS, the increased fees will result in a significant benefit to licensees, clients, ADEQ, and the public because they will allow ADHS to sustain and thus continue operating the Environmental Laboratory Licensing Program.

The increase in application fees will result in a minimal cost per laboratory to each applicant, with the lowest increase at \$377 and the highest increase at \$528 for a single license for a single laboratory and the lowest increase at \$324 and the highest increase at \$479 for a single license for multiple laboratories not located on contiguous grounds. The overall increase for an applicant that applies for a single license for multiple laboratories may be moderate if the applicant is applying for more than two laboratories. Based on current licensing, only one out of the 136 licensees that will still be required to be licensed after the rules take effect will incur a moderate increase in application fees, at \$1,297.

The increase in method and instrumentation fees will result in a minimal-to-moderate cost for 130 out of the current 141 licensees (11 will see reductions in method and instrumentation fees). Most of those 130 licensees (97 out of 130) will incur only a minimal cost (\$22 to \$987), while the remaining 33 will incur a moderate cost (\$1,047 to \$5,751). This will result in a substantial benefit to ADHS because of the additional approximately \$102,595 in method and instrumentation fee revenue each year.

Throughout the rules, ADHS is making a number of changes to bring the rules into compliance with EPA regulations, most notably those created under the Safe Drinking Water Act. These changes will result in a significant benefit to ADHS and ADEQ because bringing the rules into compliance with EPA regulations will remove an existing barrier to ADHS's and ADEQ's maintaining primacy for safe drinking water in Arizona. These changes will also result in a significant benefit to licensees and applicants because the rules' being consistent with EPA regulations will make it easier for licensees and applicants to comply with EPA regulations.

ADHS believes that 16 of the current private laboratory licensees may meet the definition of "small business" in A.R.S. § 41-1001. ADHS does not believe that any other small businesses are subject to the rules. Because these rules provide minimum standards to protect the public health, ADHS does not believe that it would be appropriate to provide exceptions to those standards based upon status as a small business. ADHS has, however, maintained the provision allowing a small business licensee to pay some of the fees associated with renewal licensing on an installment plan.

ADHS does not believe that there is a less intrusive or less costly alternative method of achieving the purpose of the rulemaking.

10. A description of the changes between the proposed rules, including supplemental notices, and final rules (if applicable):

ADHS made the following changes to the rules to make them more clear, concise, and understandable:

- In R9-14-601, ADHS revised the definition of "approved method" to clarify that the term includes an approved method used with a method alteration approved by the Department under R9-14-610(C);
- In R9-14-603(A)(21), ADHS added "Except as provided in subsection (J)," to be consistent with A.R.S. § 36-495.03(E) and subsection (J);

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- In R9-14-605(I)(1) and (2), ADHS deleted unnecessary indefinite articles;
- In R9-14-609(C), ADHS replaced "does" with "performs";
- In R9-14-610(B), for Key References D5, D6, D7, D8, H1, H2, and K1, ADHS replaced the listed URL with an updated URL;
- In R9-14-610(B), for Key Reference E, ADHS replaced the July 2006 date with a July 2005 date, as the July 2006 CFR volume will not be published until approximately December 2006, and there have been no changes in Appendix A to 40 CFR Part 136 since the end of 2000;
- In R9-14-611, R9-14-612, R9-14-613, and R9-14-614, ADHS rephrased language from "a laboratory that conducts...testing" to "a laboratory at which...testing is performed";
- In R9-14-615(C)(3)(a), ADHS deleted (C)(3)(a)(ii) and merged the remaining language because the revised definition of "approved method" in R9-14-601 makes (C)(3)(a)(ii) unnecessary;
- In R9-14-615(C)(4)(a) and (b), ADHS replaced "ADHS" with "the Department";
- In R9-14-615(D)(1), ADHS replaced the ending comma with a semicolon;
- In R9-14-618(C), ADHS replaced "it is testing" with "for which testing is performed at the mobile laboratory";
- In R9-14-621(C)(6)(a), ADHS added "or a requested item" after "requested information";
- In Table 1 in Exhibit I, ADHS corrected a typo in Section (B)(3)(a) and inserted a needed space in Section (D)(2); and
- Throughout the rulemaking, ADHS changed several references to ADHS's Director to reference the Department.
- In response to suggestions from G.R.R.C. staff, ADHS:
 - Added definitions for "key reference," "method alteration," and "qualified";
 - Revised the definitions for "proficiency testing service" and "traceability";
 - Deleted "and parameters" from R9-14-602(1);
 - Revised the language of R9-14-603(A)(20)(b) and R9-14-608 regarding the schedule for installment payments:
 - Added a new subsection (B) in R9-14-605 to clarify that ADHS will conduct at least two laboratory inspections before determining whether to conduct annual laboratory inspections under what is now subsection (C):
 - Added a new subsection (B) in R9-14-606 to list factors that ADHS shall consider in determining whether to issue a provisional license;
 - Deleted "the Department" from R9-14-609(E)(5) and "from a list provided by the Department" from R9-14-609(F)(5); and
 - Made other minor technical and grammatical changes.

11. A summary of the comments made regarding the rule and the agency response to them:

ADHS held three oral proceedings for this rulemaking: October 17 in Flagstaff, October 19 in Phoenix, and October 20 in Tucson. ADHS did not receive any oral or written comments on the rulemaking.

12. Any other matters prescribed by statute that are applicable to the specific agency or to any specific rule or class of rules:

Not applicable

13. Incorporations by reference and their location in the rules:

R9-14-610(B):

Key Reference

- A4 Office of Water, EPA, Pub. No. EPA-821-R-02-019, Method 1631, Revision E: Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Atomic Fluorescence Spectrometry (August 2002).
- A5 Technicon Industrial Systems, Industrial Method No. 129-71W, Fluoride in Water and Wastewater (December 1972).
- A6 Herbert P. Wagner et al., EPA, Pub. No. EPA 815-B-01-001, Method 317.0: Determination of Inorganic Oxyhalide Disinfection By-Products in Drinking Water Using Ion Chromatography with the Addition of a Postcolumn Reagent for Trace Bromate Analysis (rev. 2.0 July 2001).
- A7 Herbert P. Wagner et al., EPA, Pub. No. EPA 815-R-05-007, Method 326.0: Determination of Inorganic Oxyhalide Disinfection By-Products in Drinking Water Using Ion Chromatography Incorporating the Addition of a Suppressor Acidified Postcolumn Reagent for Trace Bromate Analysis (rev. 1.0 June 2002).
- A8 Teri A. Dattilio et al., EPA, Pub. No. EPA 815-R-05-008, Method 327.0: Determination of Chlorine Dioxide and Chlorite Ion in Drinking Water Using Lissamine Green B and Horseradish Peroxidase with Detection by Visible Spectrophotometry (rev. 1.1 May 2005).
- A9 B.B. Potter and J.C. Wimsatt, EPA, Pub. No. EPA/600/R-05/055, Method 415.3: Determination of Total Organic Carbon and Specific UV Absorbance at 254 nm in Source and Drinking Water (rev. 1.1 February 2005).

- C2 American Public Health Association et al., Standard Methods for the Examination of Water and Wastewater (20th ed. 1998).
- D4 Office of Ground Water and Drinking Water Technical Support Center, EPA, Pub. No. EPA 815-R-05-004, Manual for the Certification of Laboratories Analyzing Drinking Water: Criteria and Procedures Quality Assurance (5th ed. January 2005).
- D7 M.V. Bassett et al., EPA, Pub. No. EPA 815-B-01-002, Method 531.2: Measurement of N-Methylcarbamoy-loximes and N-Methylcarbamates in Water by Direct Aqueous Injection HPLC with Postcolumn Derivatiza tion (rev. 1.0 September 2001).
- D8 S.C. Wendelken et al., EPA, Method 515.4: Determination of Chlorinated Acids in Drinking Water by Liquid-Liquid Microextraction, Derivatization, and Fast Gas Chromatography with Electron Capture Detection (rev. 1.0 April 2000).
- D9 Ed K. Price et al., EPA, Pub. No. 815-R-05-005, Method 527: Determination of Selected Pesticides and Flame Retardants in Drinking Water by Solid Phase Extraction and Capillary Column Gas Chromatography/Mass Spectrometry (GC/MS) (rev. 1.0 April 2005).
- D10 J.W. Munch, EPA, Pub. No. 600/R-05/052, Method 529: Determination of Explosives and Related Compounds in Drinking Water by Solid Phase Extraction and Capillary Column Gas Chromatography/Mass Spectrometry (GC/MS) (rev. 1.0 September 2002).
- D11 J.A. Shoemaker and M.V. Bassett, EPA, Pub. No. EPA/600/R-05/053, Method 535: Measurement of Chloro-acetanilide and Other Acetamide Herbicide Degradates in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) (version 1.1 April 2005).
- D12 J.W. Munch and M.V. Bassett, EPA, Pub. No. EPA/600/R-05/054, Method 521: Determination of Nitro-samines in Drinking Water by Solid Phase Extraction and Capillary Column Gas Chromatography with Large Volume Injection and Chemical Ionization Tandem Mass Spectrometry (MS/MS) (version 1.0 September 2004).
- D13 M.M. Domino et al., EPA, Pub. No. EPA 815-B-03-002, Method 552.3: Determination of Haloacetic Acids and Dalapon in Drinking Water by Liquid-Liquid Extraction, Derivatization, and Gas Chromatography with Electron Capture Detection (rev. 1.0 July 2003).
- E 40 CFR Part 136 app. A (July 2005).
- F Office of Solid Waste and Emergency Response, EPA, Pub. No. SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (3rd ed. 1986), as amended by Update I, July 1992; Update IIA, August 1993; Update II, September 1994; Update IIB, January 1995; Update III, December 1996; Update IIIA, June 1999; and Update IIIB, July 2005.
- F2 EPA, Method 5035A: Closed-System Purge-and-Trap and Extraction for Volatile Organics in Soil and Waste Samples (draft rev. 1 July 2002).
- F3 EPA, Method 4025: Screening for Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans (PCDD/Fs) by Immunoassay (rev. 0 October 2002).
- F4 EPA, Method 3570: Microscale Solvent Extraction (MSE) (rev. 0 November 2002).
- F5 EPA, Method 3511: Organic Compounds in Water by Microextraction (rev. 0 November 2002).
- F6 EPA,. Method 5030C: Purge-and-Trap for Aqueous Samples (rev. 3 May 2003).
- F7 EPA, Method 8015D: Nonhalogenated Organics Using GC/FID (rev. 4 June 2003).
- F8 EPA, Method 5021A: Volatile Organic Compounds in Various Sample Matrices Using Equilibrium Head space Analysis (rev. 1 June 2003).
- F9 EPA, Method 9015: Metal Cyanide Complexes by Anion Exchange Chromatography and UV Detection (rev. 0 November 2004).
- F10 EPA, Method 9013A: Cyanide Extraction Procedure for Solids and Oils (rev. 1 November 2004).
- F11 EPA, Method 7000B: Flame Atomic Absorption Spectrophotometry (rev. 2 January 1998).
- F12 EPA, Method 7010: Graphite Furnace Atomic Absorption Spectrophotometry (rev. 0 January 1998).
- O 40 CFR Part 50 (July 2006).
- P EPA, Pub. No. EPA/600/4-84/013, USEPA Manual of Methods for Virology (rev. June 2001).
- P4 EPA, Pub. No. EPA 815-R-05-001, Method 1622: *Cryptosporidium* in Water by Filtration/IMS/FA (December 2005).
- P5 EPA, Pub. No. EPA 815-R-05-002, Method 1623: *Cryptosporidium* and *Giardia* in Water by Filtration/IMS/FA (December 2005).

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- Q 40 CFR Part 60 app. A (July 2006).
- S 40 CFR Part 61 apps. B and C (July 2006).
- S1 EPA, Pub. No. EPA/625/R-96/010b, Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air (2nd ed. January 1999).
- U Environmental Measurements Laboratory, U.S. Department of Energy, Pub. No. HASL-300, EML Procedures Manual, Vol. I (28th ed. February 1997).
- Z EPA, Pub. No. EPA 815-R-00-014, Volume 1, Methods for the Determination of Organic and Inorganic Compounds in Drinking Water (August 2000).
- Z1 EPA, Pub. No. EPA 821/R/01/034, EPA Method 1605: *Aeromonas* in Finished Water by Membrane Filtration Using Ampicillin-Dextrin Agar with Vancomycin (ADA-V) (October 2001).
- Z2 EPA, Pub. No. EPA 821/R-93-010-A, Methods for the Determination of Nonconventional Pesticides in Municipal and Industrial Wastewater, Volume I (rev. 1 August 1993).
- Z3 EPA, Pub. No. EPA-821-R-02-013, Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (4th ed. October 2002).
- Z4 IDEXX Laboratories, Inc., IDEXX SimPlate TM HPC Method for Heterotrophs in Water (November 2000).
- Z5 William A. Yanko, EPA, Pub. No. EPA/600/1-87/014, Occurrence of Pathogens in Distribution and Marketing Municipal Sludges (1987).
- Z6 ASTM, Standard Test Methods for Determining Sediment Concentration in Water Samples (reapproved 2002).
- Z7 CEM Corporation, Closed Vessel Microwave Digestion of Wastewater Samples for Determination of Metals (April 1992).
- Z8 EPA, Pub. No. EPA-821-R-02-024, Method 1604: Total Coliforms and *Escherichia coli* in Water by Membrane Filtration Using a Simultaneous Detection Technique (MI Medium) (September 2002).
- Z9 Lachat Instruments, QuikChem Method 10-204-00-1-X, Digestion and Distillation of Total Cyanide in Drinking and Wastewaters Using MICRO DIST and Determination of Cyanide by Flow Injection Analysis (rev. 2.1 November 30, 2000).
- Z10 OI Analytical/ALPKEM, Nitrogen, Total Kjeldahl, Method PAI-DK01 (Block Digestion, Steam Distillation, Titrimetric Detection) (rev. December 22, 1994).
- Z11 OI Analytical/ALPKEM, Nitrogen, Total Kjeldahl, Method PAI-DK02 (Block Digestion, Steam Distillation, Colorimetric Detection) (rev. December 22, 1994).
- Z12 OI Analytical/ALPKEM, Nitrogen, Total Kjeldahl, Method PAI-DK03 (Block Digestion, Automated FIA Gas Diffusion) (rev. December 22, 1994).
- Z13 EPA, Pub. No. EPA-821-R-02-012, Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (5th ed. October 2002).

R9-14-613(B)(2):

EPA, Method 8000C: Determinative Chromatographic Separations (rev. 3 March 2003).

R9-14-615(C)(7)(c):

Section D.1.2 of Chapter 5, Appendix D—Essential Quality Control Requirements, in National Environmental Laboratory Accreditation Conference, EPA Pub. No. EPA/600/R-04/003, 2003 NELAC Standard (June 5, 2003).

14. Was this rule previously made as an emergency rule?

No

15. The full text of the rules follows:

TITLE 9. HEALTH SERVICES

CHAPTER 14. DEPARTMENT OF HEALTH SERVICES LABORATORIES

ARTICLE 6. LICENSING OF ENVIRONMENTAL LABORATORIES

Section

R9-14-601. Definitions

R9-14-602. <u>Exemptions from Applicability</u>

R9-14-603. <u>Initial-License Application and Process; Transferability</u>
R9-14-604. <u>Regular License Renewal Process</u> Third Party Accreditation

R9-14-605.	Compliance Monitoring
R9-14-606.	Provisional Licensing
R9-14-607.	Fees
R9-14-608.	<u>Installment Payment of Fees by Small Businesses</u>
R9-14-609.	Proficiency Evaluation Testing
R9-14-610.	Approved Methods and References
R9-14-611.	Drinking Water Sample Methods Compliance Testing
R9-14-612.	Wastewater Sample Methods Compliance Testing
R9-14-613.	Solid, Liquid, and Hazardous Waste Sample Methods Compliance Testing
R9-14-614.	Air Sample Methods and Stack Compliance Testing
R9-14-615.	Quality Assurance
R9-14-616.	Operation
R9-14-617.	Laboratory Records and Reports
R9-14-618.	Mobile Laboratories
R9-14-619.	Out-of-State Environmental Laboratory Licensing
R9-14-620.	<u>Changes to a License</u>
R9-14-620 R9-	<u>14-621</u> . Time-frames
Table 1.	Time-frames (in days)
Exhibit I.	Approved Methods; Method Fees; Instrumentation Fees
Exhibit II	Alternate Default Limits

ARTICLE 6. LICENSING OF ENVIRONMENTAL LABORATORIES

R9-14-601. **Definitions**

In addition to the definitions in A.R.S. § 36-495, the following definitions apply in this Article, unless otherwise specified:

- 1. "Acceptance criteria" means the range of satisfactory test results for a parameter.
- "ADEQ" means the Arizona Department of Environmental Quality.
- "Affiliate" means a business organization that:
 - a. Controls or has the power to control the business organization that owns the laboratory,
 - Is controlled by or could be controlled by the business organization that owns the laboratory, or
 - Could be controlled by a third business organization that could also control the business organization that owns the laboratory.
- "Alternate method" means an analytical test procedure or technique not listed by parameter in A.A.C. R9-14-611 through R9-14-614, but approved by the Department following the procedures in A.A.C. R9-14-610(B) that is not an approved method and for which approval is requested under R9-14-610(C).
- "Analyst" means an individual who performs compliance testing at a laboratory.
- 6. "Analyte" means the substance or chemical constituent being sought or measured in an analytical procedure.
 6.7. "Applicant" means the following individual or individuals requesting a license on behalf of a business organization that owns a laboratory:
 - a. If the laboratory is owned by a sole proprietor, the individual owning the laboratory;
 - b. If the laboratory is owned by an unincorporated association, any two individuals who together own a majority interest in the laboratory:
 - e. If the laboratory is owned by a corporation, any two officers of the corporation;
 - d. If the laboratory is owned by a limited liability company, the designated manager or, if no manager is designated, any two members of the limited liability company;
 - If the laboratory is owned by a partnership, any two of the partners; or
 - If the laboratory is owned by a governmental entity, the designated director of the laboratory a person or persons requesting an initial or renewal license under R9-14-603, approval of an alternate method or method alteration under R9-14-610(C), or approval of an exemption under R9-14-615(D), and includes, as required under A.R.S. § 36-495.03(D), the owner and, if the owner is not the laboratory director, the laboratory director.
- 7-8. "Approved method" means an analytical test procedure or technique authorized by the Department to test for the presence of a particular contaminant or characteristic and includes an alternate method approved by the Department under R9-14-610(C) and an approved method used with a method alteration approved by the Department under R9-14-610(C).
- <u>8-9.</u> "ASTM" means American Society for Testing and Materials.
- 9.10. "Blind proficiency evaluation audit testing" means the Department's determination of a laboratory's laboratory analyst's ability to analyze samples correctly, accomplished by submitting samples for testing in such a manner that the laboratory analyst is not aware that they are test samples the proficiency testing is occurring.
- 10. "BLS" means Bureau of State Laboratory Services.
- 11. "Business organization" means an entity such as a sole proprietorship, an unincorporated association, a corporation, a

- limited liability company, a partnership, or a governmental entity.
- 12. "Calibration curve" means a graphical display of the functional relationship between the instrument or analytical device response and the analyte amount.
- 13. "Calibration model" means a mathematical form for a calibration curve.
- 14. "CCC" means calibration check compounds.
- 15. "CCV" means continuing calibration verification standard.
- 12. "Classification Level I license" means an approval issued by the Department to a laboratory authorizing compliance testing of 1 to 9 total parameters.
- 13. "Classification Level II license" means an approval issued by the Department to a laboratory authorizing compliance testing of 10 to 17 total parameters.
- 14. "Classification Level III license" means an approval issued by the Department to a laboratory authorizing compliance testing of more than 17 total parameters.
- 45.16."Client" means an individual or a business organization a person that submits a sample to a laboratory for compliance testing.
- 16.17. "Contaminant" means a matter, pollutant, hazardous substance, or other substance for which a sample is being
- 47.18."Contiguous grounds" means real property that can be enclosed by a single unbroken boundary line that does not enclose property owned or leased by another.
- 18.19. "Critical step" means an event a task in the testing procedure that is required to be performed within a specified time period by regulation, method, standard operating procedure, or quality assurance plan.
- 20. "Current" means up-to-date and extending to the present time.
- 19.21. "Data outlier" means a test result that falls outside of acceptance criteria.
- 20.22. "Days" means calendar days, excluding the day of the act, event, or default from which a designated period of time begins to run and excluding the last day of the period if it is a Saturday, a Sunday, or a legal holiday, in which event the period runs until the end of the next day that is not a Saturday, a Sunday, or a legal holiday.
- 23. "DBCP" means 1,2-Dibromo-3-chloropropane.24. "DDT" means dichloro-diphenyl-trichloroethane.
- 25. "DOC" means dissolved organic carbon.
- 26. "ECD" means electron capture detector.
- 27. "EDB" means 1,2-Dibromoethane.
- 21.28. "Effluent" means an outflow, as of a stream that flows out of a facility.
- 29. "EOX" means extractable organic halides.
- 30. "EP" means extraction procedure.
- 22.31. "EPA" means the United States Environmental Protection Agency.
- 32. "FID" means flame ionization detector.33. "FL" means fluorescence.
- 34. "FT-IR" means Fourier transform infrared.
- 35. "GC" means gas chromatography.36. "HEM" means n-Hexane extractable material.
- 37. "HPLC" means high performance liquid chromatography.
- 38. "HRGC" means high resolution gas chromatography.
- 39. "HRMS" means high resolution mass spectrometry.
- 40. "ICV" means initial calibration verification.
- 41. "IDOC" means initial demonstration of capability.
- 23.42. "Initial Demonstration of Capability" means a test performed by an analyst, as prescribed by a method, to document the analyst's ability to perform the method at the laboratory.
- 24.43. "Investigation" means an evaluation of laboratory a licensee's or applicant's compliance with A.R.S. Title 36, Chapter 4.3 and this Article conducted by the Department upon its own initiative or upon receipt of a written complaint and may include a laboratory inspection.
- 44. "IPC" means instrument performance check.
- "Key reference" means a document incorporated by reference in R9-14-610(B).
- 25.46."Laboratory inspection" means the Department's initial or annual assessment of a laboratory's operations at a laboratory to determine a licensee's compliance with A.R.S. Title 36, Chapter 4.3 and this Article.
- 47. "LCS" means laboratory control sample.
- 48. "Level I license" means an approval issued by the Department authorizing compliance testing of one to nine total parameters at a laboratory.
- 49. "Level II license" means an approval issued by the Department authorizing compliance testing of 10 to 17 total parameters at a laboratory.
- 50. "Level III license" means an approval issued by the Department authorizing compliance testing of more than 17 total

- parameters at a laboratory.
- 51. "LFB" means laboratory fortified blank.52. "LFM" means laboratory fortified sample matrix.
- 26.53."Licensee" means a person or persons to whom the Department issues a license to operate a laboratory and includes, as required under A.R.S. § 36-495.03(D), the owner and, if the owner is not the laboratory director, the laboratory director.
- 54. "Limit of detection" means an analyte- and matrix-specific estimate of the minimum amount of a substance that an analytical process can reliably detect, which may be laboratory dependent and is developed according to R9-14-615(C)(7).
- 55. "Limit of quantitation" means the minimum levels, concentrations, or quantities of a target variable such as an analyte that can be reported with a specific degree of confidence.
- 56. "LOQ" means limit of quantitation.
- 57. "LRMS" means low resolution mass spectrometry.
- 27.58. "Method" means an analytical test procedure or technique.
- 59. "Method alteration" means a change to an established method.
- 28. "Method detection limit" means the minimum concentration of a contaminant that can be measured and reported with 99% confidence that the concentration of the contaminant is greater than 0, determined from analyzing a sample in a given parameter as prescribed by the individual method or by 40 CFR Part 136 app. B (1998), which is incorporated by reference and on file with the Department and the Office of the Secretary of State. This incorporation by reference contains no future editions or amendments.
- 29.60."Method reporting limit" means the minimum concentration of a contaminant that a laboratory routinely reports reported after analyzing a sample in a given parameter, determined after corrections have been made for sample dilution and sample weight.
- 30.61, "Mobile laboratory" means a non-stationary facility where analysts test samples compliance testing is performed.
- 62. "MPN" means most probable number.
- 63. "MRL" means minimum reporting level. 64. "MS" means mass spectrometry.
- 65. "MSE" means microscale solvent extraction.
- 66. "NPD" means nitrogen phosphorous detector.
- 67. "NPDES" means national pollutant discharge elimination system.
- 68. "NTU" means nephelometric turbidity units.
- 69. "ONPG-MUG" means ortho-nitrophenyl-β-D-galactopyranoside-4-methylumbelliferyl-β-D-glucuronide.
- 70. "Owner" means a person that has controlling legal or equitable interest in and authority over a laboratory's operations.
- 71. "PAH" means polynuclear aromatic hydrocarbon.
- 31.72. "Parameter" means the combination of a particular type of sample with a particular test approved method by which the sample will be analyzed for a particular contaminant analyte or characteristic.
- 73. "PB" means particle beam.74. "PCB" means polychlorinated biphenyls.
- 75. "PCDD" means polychlorinated dibenzodioxins.
- 76. "PCDF" means polychlorinated dibenzofurans.
- 77. "PDA" means photodiode array.
- 78. "PID" means photoionization detection.
- 79. "POX" means purgeable organic halides.
- 80. "Precision" means repeatability of measurement data, specifically the similarity of successive independent measurements of a single magnitude generated by repeated applications of a process under specified conditions.
- 32.81."Proficiency evaluation audit testing" means a proficiency evaluation testing service's determination of a laboratory's laboratory analyst's ability to analyze samples correctly, accomplished by submitting samples to the laboratory for testing and then analyzing the acceptability of the laboratory's results.
- 33.82. "Proficiency evaluation testing service" means the Department, the EPA, or an independent service acceptable to the EPA or, if the EPA has not indicated acceptance of a proficiency testing service for a parameter, acceptable to the Department based on recognition from a national organization such as the National Environmental Laboratory Accreditation Program.
- 34. "Principal State Laboratory System" means the Department, the Bureau of State Laboratory Services, and the Radiation Regulatory Agency Laboratory.
- 83. "Qualified" means explained in documentation.
- 84. "Quality assurance plan" means documentation that meets the requirements of R9-14-615(B).
- 35.85."Quality control checks" means the steps taken by a laboratory analysts to monitor the accuracy and precision of its sample analysis of samples.

- 86. "QCS" means quality control sample.
- 36.87."RDX" means Hexahydro-1,3,5-trinitro-1,3,5-triazine.
- 37.88. "Records" means all written, recorded, and electronic documentation necessary to reconstruct all laboratory activities that produce data and includes all information relating to the laboratory's equipment, analytical test methods, and related activities.
- 89. "RPD" means relative percent difference.
- 90. "Ruggedness" means the ability of a method to withstand changes in environmental factors and produce repeatable
- 38.91. "Sample" means a specimen that is a representative part of a whole or a single item from a group.
- 39.92. "Single laboratory" means an individual laboratory facility or multiple laboratory facilities located on contiguous grounds and owned by the same person having the same owner.
- 40-93. "Small business" means a business organization, including its affiliates, that is independently owned and operated, that is not dominant in its field, and that employs fewer than 100 full-time employees or had gross annual receipts of less than \$4 million in its last fiscal year.
- 94. "SOUR" means specific oxygen uptake rate.
- 95. "SPE" means solid-phase extraction.
- 96. "SPLP" means synthetic precipitation leaching procedure.
- 41.97. "Standard operating procedure" means the reduction to writing of a laboratory's documented method process for carrying on business, analysis, or action, with techniques and procedures instructions for performing routine or repetitive tasks.
- 42.98. "Statistical outlier" means an individual data point that has a value far from those of the other data points in a set and that has been determined through statistical analysis to have derived from a different population than the other
- 99. "TCLP" means toxicity characteristics leaching procedure.
- 100."TDS" means total dissolved solids.
- 101."TE" means thermal extraction.
- 102."TNT" means trinitrotoluene.
- 103."TOC" means total organic carbon.
- 104. "TOX" means total organic halides.
- 105. "Traceability" means the establishment of an unbroken chain of comparisons to the reference of origin.
- 106. "TS" means thermospray.
- 107. "TSS" means total suspended solids.
- 108. "UV" means ultraviolet.
- 109. "Valid" means that a license, certificate, or other form of authorization is in full force and effect and not suspended.
- 110. "VOC" means volatile organic compound.
 111. "VOST" means volatile organic sampling train.

R9-14-602. **Exemptions from** Applicability

This Article does not apply to:

- 1. those The laboratories and parameters exempted by A.R.S. § 36-495.02(A);
- 2. or to compliance Compliance testing performed under the Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. §§-136-136y; or
- 3. An out-of-state laboratory at which only microbiology testing of bottled water is performed and for which the owner holds a current and valid environmental laboratory license or certificate, issued by another state of the United States, that specifically authorizes drinking water testing.

R9-14-603. **Initial** License **Application and Process**; **Transferability**

- A. To obtain a an initial or renewal license to operate a laboratory, an applicant shall submit to the Department, within the time prescribed in subsection (C), a an application completed application on using a Department-provided form provided by the Department. The application shall comply with A.R.S. § 36-495.03(A)-(B). An applicant shall submit to the Department the appropriate application fee or fees along with the completed application form.
- B. An applicant shall submit the following information on the application form and including:
 - 1. The name of the laboratory;
 - The current Arizona license number for the laboratory, if any;
 - The current EPA certification number for the laboratory, if any;
 - 2.4. The physical and mailing address of addresses for the laboratory;
 - The telephone number; fax number; and e-mail address for the laboratory;
 - 3-6. The name and address of the owner and of each individual and business organization additional person that has an ownership interest in the laboratory;
 - 4.7. For the owner and each additional business organization with an ownership interest in the laboratory, the name of

- each officer, principal, and statutory agent;
- 5.8. The name of the individual directing the laboratory director;
- 9. The type of laboratory:
 - a. Governmental;
 - b. Company, performing internal work only;
 - c. Commercial, for profit; or
 - <u>d.</u> Other, with a description of the type of laboratory operation;
- 6-10. The classification level license Level for which applied the applicant is applying;
- 7-11. Whether the applicant is applying for to license a single laboratory or multiple laboratories;
- 8-12. If the applicant is applying for to license a mobile laboratory, the vehicle make, vehicle identification number, and Arizona vehicle license number of the mobile laboratory;
- 9-13. If the applicant is applying for to license a mobile laboratory that is affiliated with a non-mobile laboratory, the name of the non-mobile laboratory:
- 10.14. The name, title, and educational background of each individual authorized to sign final reports for the laboratory;
- 11.15. A list of the references and methods parameters for which the applicant is requesting a license to be licensed or, if an application for a renewal license, an indication that the applicant desires to be licensed for the same parameters as on the current license;
- 12.16.A list of the instruments and equipment that to be used at the laboratory—will use for compliance testing or, if an application for a renewal license, an indication that the applicant is using the same instruments and equipment as used under the current license;
- 13.17. A list of the software that to be used at the laboratory will use for instrument control and data reduction interpretation or, if an application for a renewal license, an indication that the applicant is using the same software as used under the current license;
- 44.18.If the applicant is applying for an out-of-state laboratory, whether the applicant wants the laboratory to receive technical updates at the laboratory by facsimile transmission fax or through the Internet;
- 15. If the applicant is applying as a small business for a private laboratory and wants to pay method, instrument, and proficiency evaluation fees in installments, the applicant shall provide the following information:
 - a. A list of the affiliates of the business organization that owns the laboratory;
 - b. The relationship between each affiliate and the business organization that owns the laboratory;
 - c. Whether the laboratory is independently owned and operated;
 - d. The type of business organization that owns the laboratory;
 - e. If the business organization that owns the laboratory is a corporation, whether the stock of the corporation or any of its affiliates is publicly traded;
 - f. The number of individuals employed full-time by the business organization that owns the laboratory;
 - g. The number of individuals employed full-time by each affiliate of the business organization that owns the laboratory;
 - h. Whether the gross annual receipts of the business organization that owns the laboratory were less than or greater than or equal to \$4,000,000 in the last fiscal year;
 - i. Whether the combined gross annual receipts of the affiliates of the business organization that owns the laboratory were less than or greater than or equal to \$4,000,000 in the last fiscal year; and
 - j. Whether the business organization that owns the laboratory is dominant in its field;
- 19. If an application for an initial license:
 - a. A copy of a proficiency testing report, for the current or most recently completed year, for the state in which the laboratory is located or, if that state does not require proficiency testing, for another state in which the laboratory is licensed or certified, for each of the parameters for which licensure is requested;
 - <u>b.</u> A list of the states in which the laboratory is licensed or certified and the corresponding license or certificate number for each state; and
 - c. A copy of a current quality assurance plan for the laboratory;
- 20. If an application for a renewal license:
 - <u>a.</u> A copy of a current standard operating procedure, limit of detection, and proficiency testing report, if available, for each parameter newly requested on the application; and
 - b. If the applicant desires to make payments in installments as permitted under R9-14-608, an indication of this and the monthly, bimonthly, or quarterly schedule for the payments;
- 21. Except as provided in subsection (J), the fees required under R9-14-607 and R9-14-608, payable to the Arizona Department of Health Services by credit card; certified check; business check; or money order; or, if the owner is an Arizona state agency, purchase order;
- 22. Attestation, made under oath, that the owner and the laboratory director are aware of all applicable requirements in A.R.S. Title 36, Chapter 4.3 and this Article and that the information provided in the application, including the information in the documents accompanying the application form, is accurate and complete; and

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- 16.23.A notarized statement by the applicant and the The dated and notarized signature of the laboratory director of the laboratory verifying the information on the application and:
 - a. If the owner is an individual, the individual;
 - b. If the owner is a corporation, an officer of the corporation;
 - c. If the owner is a partnership, one of the partners;
 - d. If the owner is a limited liability company, a manager or, if the limited liability company does not have a manager, a member of the limited liability company;
 - e. If the owner is an association or cooperative, a member of the governing board of the association or cooperative;
 - f. If the owner is a joint venture, one of the individuals signing the joint venture agreement;
 - g. If the owner is a governmental agency, the individual in the senior leadership position with the agency or an individual designated in writing by that individual; or
 - h. If the owner is a business organization type other than those described in subsections (A)(23)(b) through (f), an individual who is a member of the business organization.
- **C.B.** The An application may include an agreement between the applicant and the Department that the Department may submit supplemental requests for additional information.
- **C.** An applicant shall submit an application:
 - 1. For an initial license for an in-state laboratory, at least 30 days before the applicant intends to begin operating the instate laboratory;
 - 2. For an initial license for an out-of-state laboratory, at least 60 days before the applicant intends to begin performing Arizona compliance testing;
 - 3. For a renewal license for an in-state laboratory, at least 30 days before the expiration date of the current license; and
 - 4. For a renewal license for an out-of-state laboratory, at least 60 days before the expiration date of the current license.
- D. Multiple laboratories located on contiguous grounds and owned by the same person may be:
 - 1. Licensed as a single laboratory, or
 - 2. Licensed separately if the applicant submits an application and an application fee as required by A.A.C. R9-14-607(A) for each laboratory.
- **<u>D.</u>** The Department may issue a single laboratory license for:
 - 1. A single laboratory;
 - 2. Multiple laboratories that are located on contiguous grounds and have the same owner, if the applicant submits one application and combined fees for the laboratories; or
 - 3. Multiple laboratories, including mobile laboratories, that have the same owner but are not located on contiguous grounds, if:
 - a. The applicant submits a separate application and fees for each laboratory,
 - b. Each non-mobile laboratory is located in Arizona, and
 - <u>Each mobile laboratory has a current and valid Arizona vehicle registration.</u>
- E. Multiple laboratories, including mobile laboratories, located on noncontiguous grounds and owned by the same person may be:
 - 1. Licensed separately, or
 - 2. Operated under a single license if:
 - The applicant submits an application and an application fee as required by A.A.C. R9-14-607(B) for each laboratory.
 - b. Each non-mobile laboratory is located in Arizona, and
 - c. Each mobile laboratory maintains an Arizona vehicle registration.
- **E.** The Department shall not issue a single laboratory license for multiple laboratories that do not meet the requirements of subsection (D)(2) or (3).
- F. An application is not complete without payment of The Department shall not consider an applicant to be in compliance with the requirements for licensure, as provided under A.R.S. § 36-495.09(A)(5), if the applicant does not pay the appropriate application fee or fees and payment of the amount billed under A.A.C. R9-14-608(C) required under R9-14-607 and R9-14-608.
- **G.** The Department shall process an application as provided in R9-14-621.
- **H.** A laboratory license is valid only for the facility or facilities for which the license is issued and cannot be transferred to another facility.
- I. A laboratory license is valid only in the name of the persons to whom it is issued and expires upon a change in laboratory name, laboratory director, or ownership, unless within 20 business days after the change, the Department receives written notice of the change and an application for a new license.
- J. The Department shall not charge a fee for a license application submitted under subsection (I) and shall issue a new license reflecting the change upon determining continued compliance with A.R.S. Title 36, Chapter 4.3 and this Article.

R9-14-604. Regular License Renewal Process Third Party Accreditation

Ar To renew a regular license, an applicant shall submit to the Department an application completed on the same type of

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- form used for an initial license. An applicant shall submit to the Department the appropriate application fee or fees along with the completed application form.
- **B.** If the applicant is applying for an in-state laboratory, the applicant shall submit the completed application at least 30 days before expiration of the current license.
- C. If the applicant is applying for an out-of-state laboratory, the applicant shall submit the completed application at least 60 days before expiration of the current license.
- **D.** An application is not complete without payment of the appropriate application fee or fees and payment of the amount billed under A.A.C. R9-14-608(C).
- A. A laboratory that holds current and valid accreditation issued by the National Voluntary Laboratory Accreditation Program administered by the National Institute of Standards and Technology is exempt from licensure under this Article, as authorized under A.R.S. § 36-495.02, for the term of the accreditation.
- **B.** If a laboratory's accreditation issued by the National Voluntary Laboratory Accreditation Program expires or is suspended, revoked, or voluntarily terminated, the laboratory is required to be licensed as provided under A.R.S. Title 36, Chapter 4.3 and this Article.

R9-14-605. Compliance Monitoring

- A. The Department shall conduct a laboratory inspection and may conduct an investigation or proficiency evaluation audit, or both, of an applicant's laboratory as part of the substantive review for an initial license.
 - 1. The Department shall commence the laboratory inspection, investigation, or proficiency evaluation audit, or combination of the 3, no more than 30 days after notice of administrative completeness has been mailed for an in-state laboratory or no more than 60 days after notice of administrative completeness has been mailed for an out-of-state laboratory.
 - The Department and applicant may mutually agree in writing to extend the laboratory inspection, investigation, or proficiency evaluation audit dates.
- **B.A.**The Department may conduct a laboratory inspection, investigation, or proficiency evaluation audit testing, or any combination of the 3 three, of a licensee's or applicant's laboratory at any other time before or during the a laboratory's license period.
- **B.** The Department shall conduct at least two laboratory inspections before determining whether to conduct annual laboratory inspections as provided under subsection (C).
- C. In determining whether to conduct an annual laboratory inspection, the Department shall consider:
 - 1. The Department's findings at the last two laboratory inspections;
 - 2. The licensee's adherence to any corrective action plans created as a result of the last two laboratory inspections;
 - 3. Whether there has been a change in ownership or laboratory director since the last laboratory inspection;
 - 4. The extent to which the compliance testing performed at the laboratory has changed since the last laboratory inspection or would change as a result of a renewal application; and
 - 5. Performance on the most recent proficiency testing completed at the laboratory.
- **D.** For a laboratory at which drinking water compliance testing is performed, the Department shall conduct a laboratory inspection at least every three years or as otherwise required by the EPA.
- **C.E.** The Department shall comply with A.R.S. § 41-1009 in conducting laboratory inspections and investigations that occur at a laboratory.
- **D.F.**If the Department determines based on a laboratory inspection, investigation, or proficiency evaluation audit testing, or any combination of the 3 three, that a laboratory is not laboratory owner, officer, agent, or employee has engaged in conduct described under A.R.S. § 36-495.09(A) in compliance with A.R.S. Title 36, Chapter 4.3 and this Article, the Department shall request that the licensee or applicant submit to the Department a written corrective action plan, unless the Department determines one of the following, in which case the Department shall may take action under A.R.S. § 36-495.09:
 - 1. That the deficiencies were committed intentionally;
 - 2. That the deficiencies cannot be corrected within a reasonable period of time;
 - 3. That the deficiencies are evidence of a pattern of noncompliance;
 - 4. That the deficiencies are a risk to any person; the public health, safety, or welfare; or the environment; or
 - 5. That there is a reasonable belief, as stated in A.R.S. § 36-495.09(B), that a violation of A.R.S. § 36-495.09(A)(5) has occurred and that the life or safety of the public is immediately affected.
- E.G. A corrective action plan shall be in writing and shall include the corrective action that will be taken and the date by which corrective action will be completed, which cannot be more than 120 days after the date that the Department requested the corrective action plan.
 - 1. A licensee shall submit a corrective action plan to the Department within 45 days from the date that the Department requested the corrective action plan.
 - 2. An applicant shall submit a corrective action plan to the Department within 28 days the date that the Department requested the corrective action plan. Within 30 days after receiving a request for a written corrective action plan, a licensee or applicant shall submit to the Department a written corrective action plan that includes the following for

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- each identified deficiency:
- 1. A description of how the deficiency will be corrected, and
- 2. A date of correction for the deficiency.
- **H.** The Department shall accept a written corrective action plan if the plan:
 - 1. Describes how each identified deficiency will be corrected, and
 - 2. Includes a date for correcting each deficiency as soon as practicable based upon the actions necessary to correct the deficiency.
- **F.I.** If the Department disapproves a corrective action plan, the Department shall send to the licensee or applicant a written notice of disapproval requesting that the licensee or applicant submit to the Department a revised corrective action plan for the items that the Department disapproved disapproves.
 - 1. A licensee or an applicant shall submit the <u>a</u> revised corrective action plan to the Department within 21 days from <u>after</u> the date of the <u>a</u> written notice of disapproval.
 - 2. If a licensee or an applicant does not submit a revised corrective action plan within 21 days from after the date of the a written notice of disapproval, the Department may deny the application or take any other action authorized by law under A.R.S. § 36-495.09.
- G.J.A licensee or an applicant shall notify the Department when corrective action has been completed.
- **H.K.**The Within 30 days after receiving notice that corrective action has been completed, the Department shall determine if whether each deficiency has been corrected and whether the corrective action brings the a laboratory operations is in into substantial compliance with A.R.S. Title 36, Chapter 4.3 and this Article-within 30 days of notification that the corrective action has been completed.
- <u>L.</u> If the Department determines that the <u>a</u> licensee or applicant has not corrected the deficiencies <u>a</u> deficiency or that the licensee or applicant has not corrected the deficiencies <u>a</u> deficiency within a reasonable period of time, the Department may take any enforcement action authorized by law as a result of the deficiencies deficiency.
- **LM.**Under A.R.S. § 41-1009(G), the Department's decision regarding whether a licensee or an applicant may submit a corrective action plan to correct deficiencies identified in a laboratory inspection or investigation at the laboratory or whether these deficiencies have a deficiency has been corrected or have has not been corrected within a reasonable period of time is not an appealable agency action as defined by A.R.S. § 41-1092.

R9-14-606. Provisional Licensing

- **A.** The Department may issue a provisional license to a licensee when the Department suspends the licensee's regular license because of deficiencies identified in an investigation, laboratory inspection, or proficiency evaluation audit testing, or any combination of the three, if the licensee agrees to carry out a plan acceptable to the Department to eliminate the deficiencies.
- **B.** In determining whether to issue a provisional license, the Department shall consider:
 - 1. The nature of the deficiencies upon which the suspension is based;
 - 2. The licensee's history of compliance with A.R.S. Title 36, Chapter 4.3 and this Article;
 - 3. The extent to which the public health and safety may be impacted by the continued operation of the laboratory with a provisional license; and
 - 4. The extent to which the public's interests are served by allowing the licensee the opportunity to correct the deficiencies and continue operating with a provisional license.
- **B.C.**The Department shall issue an amended certified list of parameters for a provisional license.
- C.D. A licensee shall return its regular license to the Department within 14 days from after the date of receipt of receiving written notification of the license suspension.
- **D-E.** A provisional license is valid for a set-period established by the Department, not to exceed 12 months.
- **E.F.** A licensee with a provisional license who desires to renew the laboratory's obtain a regular license shall apply for renewal an initial license at least 30 days before expiration of the provisional license expires.
- G. The Department shall issue a regular license renewal unless the Director determines that as described in subsection (F) only upon determining that the licensee is not in a licensee is in full compliance with the corrective action plan; A.R.S. Title 36, Chapter 4.3; and this Article.
- **F.H.** The Department shall not issue a provisional license to an applicant for an initial license.

R9-14-607. Fees

- An applicant applying for a single license for a single laboratory shall submit to the Department, at the time of application, the following non-refundable application fee:
 - 1. For a classification Level I license: \$1,300.00
 - 2. For a classification Level II license: \$1.651.00
 - 3. For a classification Level III license \$1,820.00
- **B.** An applicant applying for a single license for multiple laboratories not on contiguous grounds shall submit to the Department, at the time of application, a non-refundable application fee for each noncontiguous laboratory, as follows:
 - 1. For a classification Level I license: \$1,118.00

- 2. For a classification Level II license: \$1,469.00
- 3. For a classification Level III license: \$1.651.00
- C. A licensee or an applicant shall submit to the Department a non-refundable fee for licensing each approved method, alternate method, and associated instrument requested on the application or during the license period, as follows:
 - 1. Microbiology Testing Fees
 - a. Total coliform:
 - i. Most Probable Number: \$177.00
 - ii. Membrane filtration: 177.00
 - iii. Colilert: 118.00
 - iv. Colisure: 118.00
 - v. Presence-Absence: 177.00
 - b. Fecal coliform:
 - i. Most Probable Number: 177.00
 - ii. Membrane filtration: 177.00
 - c. Fecal streptococcus:
 - i. Most Probable Number: 177.00
 - i. Membrane filtration: 177.00
 - d. Salmonella: 177.00
 - e. Heterotrophic plate count: 118.00
 - f. Any one approved method in each group for total coliform, fecal coliform, fecal streptococcus, Salmonella, and heterotrophic plate count: 530.00
 - g. Any combination of approved methods for total coliform, fecal coliform, fecal streptococcus, Salmonella, and heterotrophic plate count: 943.00
 - h. Viruses: 295.00
 - i. Parasites: 295.00
 - j. Microscopic Particulate Analysis: 199.00
 - 2. Bioassay

Any combination of methods for estimating the chronic and acute toxicity of effluents and waters to fresh water organisms:\$707.00

- 3. Demand
 - a. Biochemical Oxygen Demand: \$118.00
 - b. Chemical Oxygen Demand: 118.00
- 4. Inorganic Chemistry Metals
 - a. Flame atomic absorption approved methods.
 - i. Each metal for which the laboratory applies using any single flame atomic absorption approved method from any single approved method reference: \$20.00 each, up to a maximum of \$384.00
 - ii. Each metal for which the laboratory applies using any combination of flame atomic absorption approved methods from any combination of approved method references: \$31.00 each, up to a maximum of \$608.00
 - b. Electrothermal graphite furnace atomic absorption approved methods.
 - Each metal for which the laboratory applies using any single graphite furnace atomic absorption approved method from any single approved method reference: \$20.00 each, up to a maximum of \$354.00
 - ii. Each metal for which the laboratory applies using any combination of graphite furnace atomic absorption approved methods from any combination of approved method references: \$31.00 each, up to a maximum of \$566.00
 - c. Inductively coupled plasma emission spectrometer approved methods.
 - i. Each metal for which the laboratory applies using any single inductively coupled plasma approved method from any single approved method reference: \$16.00 each, up to a maximum of \$338.00
 - ii. Each metal for which the laboratory applies using any combination of inductively coupled plasma approved methods from any combination of approved method references: \$23.00 each, up to a maximum of \$507.00
 - d. Inductively coupled plasma/mass spectrometer approved methods. Each metal for which the laboratory applies using any inductively coupled plasma/mass spectrometer approved method from any approved method reference: \$23.00 each, up to a maximum of \$507.00
 - e. Colorimetric metal testing approved methods. Each colorimetric approved method for which the laboratory applies: \$59.00
 - Mercury cold vapor approved methods.
 - Any single mercury cold vapor approved method from any single approved method reference for which the laboratory applies: \$118.00
 - ii. Any combination of mercury cold vapor approved methods from any combination of approved method references for which the laboratory applies: \$177.00

- g. Metals by hydride generation approved methods. Each hydride metal for any approved method from any approved method reference for which the laboratory applies: \$59.00 each, up to a maximum of \$88.00
- 5. Inorganic Chemistry Nonmetals
 - a. Nonmetals Group IA
 - i. Alkalinity: \$30.00
 - ii. Chloride: 30.00
 - iii. Chlorine: 30.00
 - iv. Chlorine dioxide: 30.00
 - v. Color: 30.00
 - vi. Hardness (as CaCO3): 30.00
 - vii. Hydrogen ion (pH): 30.00
 - viii. Ozone: 30.00
 - ix. Specific conductance: 30.00
 - x. Total Dissolved Solids (Filterable Residue): 30.00
 - xi. Turbidity: 30.00
 - b. Nonmetals Group IB
 - i. Nitrate: \$59.00
 - ii. Sulfate: 59.00
 - iii. Fluoride: 59.00
 - iv. Sodium Azide: 59.00
 - v. Sodium/Potassium Perchlorate: 59.00
 - c. Maximum for any combination of Nonmetals Group IA and IB for the first approved method for which the laboratory applies: \$332.00
 - d. Each additional Nonmetals Group IA approved method for which the laboratory applies: \$14.00
 - e. Each additional Nonmetals Group IB approved method for which the laboratory applies: \$30.00
 - f. Nonmetals Group IIA
 - i. Acidity: \$30.00
 - ii. Total Hardness: 30.00
 - iii. Surfactants: 30.00
 - iv. Total Residue: 30.00
 - v. Nonfilterable Residue: 30.00
 - vi. Settleable Residue: 30.00
 - vii. Volatile Residue: 30.00
 - g. Nonmetals Group IIB
 - i. Ammonia: \$59.00
 - ii. Bromide: 59.00
 - iii. Kieldahl Nitrogen: 59.00
 - iv. Nitrite: 59.00
 - v. Orthophosphate: 59.00
 - vi. Phosphorus: 59.00
 - h. Maximum for any combination of Nonmetals Group IIA and IIB for the first approved method for which the laboratory applies: \$442.00
 - i. Each additional Nonmetals Group IIA approved method for which the laboratory applies: \$14.00
 - Each additional Nonmetals Group IIB approved method for which the laboratory applies: \$30.00
 - Lon chromatograph approved methods. Each ion for which the laboratory applies using any ion chromatograph approved method from any approved method reference: \$26.00 each, up to a maximum of \$260.00
- 6. Major Analytical Chemistry Instruments
 - a. Each Gas Chromatograph instrument: \$59.00
 - b. Each Gas Chromatograph/Mass Spectrometer instrument: \$118.00
 - c. Each Atomic Absorption Spectrometer instrument: \$59.00
 - d. Each Inductively Coupled Plasma Atomic Emission Spectrometer instrument: \$59.00
 - e. Each Inductively Coupled Plasma Atomic Emission Spectrometer/Mass Spectrometer instrument: \$118.00
 - f. Each High Performance Liquid Chromatograph instrument: \$59.00
 - g. Each High Performance Liquid Chromatograph/Mass Spectrometer instrument: \$118.00
 - h. Each Ion Chromatograph instrument: \$59.00
 - i. Each Total Organic Halide instrument: \$59.00
 - i. Each Transmission Electron Microscope: \$237.00
 - k. Each X-Ray Diffraction instrument: \$59.00
- 7. Volatile Organic Chemistry

			Single-Method	Combination
	a.	Volatile Organics by EPA Methods-502.2, 8021B	\$118.00	\$177.00
	b.	Purgeable Halocarbons by EPA Method 601	59.00	
	c.	Total Trihalomethanes by EPA Methods 502.2, 524.2, 551.1	59.00	118.00
	d.	Purgeable Aromatics by EPA Methods 602, 8015B	59.00	118.00
	e.	Fuel Class Hydrocarbons by 8015AZs	59.00	
	f.	Acrolein, Acrylonitrile, and Acetonitrile by EPA Methods 603, 8031, 8032A, 8033	59.00	88.00
	g.	Acrylamide, Acrylonitrile, and Acrolein by EPA Method 8316	59.00	
	h.	Purgeables by EPA Methods 524.2, 624, 1624, 8260B	118.00	-235.00
8.	Semivolat	i le Organic Chemistry		
			Single Method	Combination
	a.	Aniline and Derivatives by EPA Method 8131	\$90.00	
	b.	Benzidines by EPA Method 605	59.00	
	c.	Benzidines and Nitrogen Pesticides by EPA Method 553	90.00	
	d.	Bis(2-chloroethyl)ether Hydrolysis Products by EPA Method 8430	90.00	
	e.	Carbamates/Urea Pesticides by EPA- Methods 531.1, 632, 8318	90.00	133.00
	£.	Carbonyl Compounds by EPA Method- 8315A	90.00	
	g.	Chlorinated Herbicides by EPA- Methods 515.2, 555, 8151A, Standard- Methods 6640-B, ASTM D-3478-85	90.00	-133.00
	h.	Chlorinated Hydrocarbons by EPA Methods 612, 8121	90.00	133.00
	i.	1,2-Dibromoethane and 1,2-Dibromo-3-Chloropropane by EPA Methods 504.1, 551.1, 8011, BLS Method 127	90.00	133.00
	j.	Diquat and Paraquat by EPA Method 549.2	90.00	
	k.	Endothall by EPA Method 548.1	90.00	
	l.	Glyphosate by EPA Methods 547, 6651	90.00	133.00
	m.	Haloacetic Acids by EPA Methods 552.1 and 552.2	90.00	-133.00
	n.	Haloethers by EPA Methods 611, 8111	90.00	133.00
	0.	Nitroaromatics and Cyclic Ketones by EPA Methods 609, 8091	90.00	133.00

p.	Nitroaromatics and Nitramines by EPA-Method 8330	90.00	
q.	Nitroglycerine by EPA Method 8332	90.00	
r.	Nitrosamines by EPA Methods 607, 8070A	90.00	133.00
S.	Nonvolatiles by EPA Methods 8321A, 8325	118.00	177.00
t.	Organochlorine Pesticides/ Polychlorinated Biphenyls by EPA- Methods 505, 508, 508.1, 608, 8081, 8082, Standard Method 6630C, ASTM- Method D3086-85, EPA-600/4-81-045	118.00	177.00
u.	Organophosphorus and Nitrogen- Pesticides by EPA Methods 507, 614, 1657, 8141A	90.00	133.00
V.	Phenols by EPA Methods 604, 8041	90.00	133.00
₩.	Polynuclear Aromatic Hydrocarbons by EPA Methods 550, 550.1, 610, 8100, 8310	90.00	133.00
X.	Phthalate Esters by EPA Methods 506, 606, 8061A	90.00	133.00
y.	Semivolatile organics by EPA Methods-525.2, 625, 1625, 8270C	118.00	237.00
Z.	Semivolatile organics by EPA Method 8410	90.00	
aa.	Tetrazine by EPA Method 8331	90.00	
bb.	Triazine Pesticides by EPA Method 619	90.00	
cc.	Dioxin and Furans by EPA Methods 613, 1613, 8280A, 8290	354.00	471.00

9. Radiochemicals

- a. Fee for radiochemistry testing: \$351.00
- b. Each radioisotope counting instrument: 59.00
- c. Gross Alpha Activity: 118.00
- d. Gross Beta Activity: 118.00
- e. Radium-226: 118.00
- f. Radium-228: 118.00
- g. Cesium 118.00
- h. Iodine: 118.00
- i. Polonium-210: 118.00
- i. Radon: 118.00
- k. Strontium-89: 118.00
- l. Strontium-90: 118.00
- m. Tritium: 118.00
- n. Uranium: 118.00
- o. Photon Emitters, each method: 118.00
- p. Each radiochemical approved method when the laboratory applies for five or more: 95.00.
- 10. Hazardous Characteristic Testing Approved Methods (*The fees for these procedures are for the sample extraction and leaching processes only.)
 - a. Corrosivity toward steel: \$49.00
 - b. Ignitability: 49.00
 - c. Reactivity: 49.00
 - d. Extraction Procedure Toxicity Characteristic*: 118.00
 - e. Toxicity Characteristic Leaching Procedure*: 235.00
 - f. Synthetic Characteristic Leaching Procedure*: 235.00

11. Miscellaneous Compliance Testing

- a. Total Organic Carbon: \$59.00
- b. Total Organic Halides: 59.00
- c. Purgeable Organic Halides: 88.00
- d. Extractable Organic Halides: 88.00
- e. Ethylene Glycol: 118.00
- f. Total Petroleum Hydrocarbon: 118.00
- g. Oil and Grease: 59.00
- h. Cyanide; total, direct, and amenable to chlorination: 118.00
- i. Total Phenols: 118.00
- j. Lead in paint: 30.00
- k. Magnesium gravimetric: 30.00
- l. Sulfide: 59.00
- m. Sulfite: 59.00
- n. Silica: 59.00
- o. Bulk Asbestos Identification: 177.00
- p. White Phosphorous: 90.00
- g. Each Immunoassay Test: 59.00
- r. Compatibility Test for Wastes and Membrane Liners: 26.00
- s. Cation-Exchange Capacity of Soil: 26.00
- t. Asbestos fiber counting by:
 - i. Light microscopy: 177.00
 - ii. Electron microscopy: 295.00
 - iii. Electron microscopy with X-Ray Diffraction: 390.00

12. Ambient Air Compliance Testing Approved Methods

- a. Carbon Monoxide: \$235.00
- b. Hydrocarbons: 235.00
- c. Lead: 235.00
- d. Nitrogen Dioxide: 235.00
- e. Ozone: 235.00
- f. Particulate Matter: 235.00
- g. Sulfur Oxides: 235.00
- h. Maximum for ambient air testing: 1,238.00

13. Air - Stationary Sources and Stack Testing Approved Methods

- a. Carbon Dioxide/Oxygen/Excess Air: \$235.00
- b. Carbon Monoxide: 235.00
- c. Carbonyl Sulfide/Carbon Dioxide: 235.00
- d. Fluoride: 235.00
- e. Gaseous Organic Compounds: 235.00
- f. Hydrogen Sulfide: 235.00
- g. Inorganic Lead: 235.00
- h. Moisture Content: 235.00
- i. Nitrogen Oxide: 235.00
- i. Particulate Emissions:
 - i. Asphalt Processing: 118.00
 - ii. Fiberglass Insulation: 118.00
 - iii. Nonsulfate: 118.00
 - iv. Nonsulfuric Acid: 118.00
 - v. Pressure Filters: 118.00
 - vi. Stationary Sources: 118.00
 - vii. Sulfur Dioxide: 118.00
 - viii. Wood Heaters: 118.00
 - ix. Particulate emissions maximum: 707.00
- k. Sulfur and Total Reduced Sulfur: 235.00
- L. Sulfur Dioxide: 235.00
- m. Sulfuric Acid Mist: 235.00
- n. Toxic Organic Compounds in Ambient Air by Method TO-15: 118.00
- o. Volatile Matter/Density/Solids/Water: 235.00
- p. Vapor Tightness Gasoline Delivery Tank: 235.00

- Volatile Organic Compounds: 235.00
- r. Wood Heaters Certification and Burn Rates: 235.00
- s. Stationary Sources and Stack Testing maximum: 3,536.00
- t. Petroleum product analysis:
 - Hydrometer method: 59.00
 - ii. Sulfur: 118.00
 - iii. Heat of Combustion: 59.00
- 14. Arizona Emission Test Approved Methods
 - a. Sulfuric Acid Mist/Sulfur Oxides: \$235.00
 - b. Dry Matter: 235.00
- 15. Hazardous Air Pollutant Approved Methods for National Emission Standards
 - a. Arsenic: \$235.00
 - b. Bervllium: 235.00
 - c. Mercury: 235.00
 - d. Polonium-210: 235.00
 - e. Vinyl Chloride: 235.00
 - f. Maximum for hazardous air pollutants: 884.00
- 16. When an alternate method is a revision of a method listed in A.A.C. R9-14-611 through A.A.C. R9-14-614, the fee is the same as for the listed method, unless the technology of the alternate method is different from that of the listed method. All other alternate method fees are charged as follows:
 - a. Alternate Gas Chromatography method: \$90.00
 - Alternate Gas Chromatography/Mass Spectrometry method: 118.00
 - Alternate miscellaneous method: 58.00
- D. An applicant shall submit to the Department a non-refundable administrative fee of \$101.00 for all proficiency evaluation audits to occur during the license period.
- E. An applicant for an out-of-state laboratory shall submit to the Department an annual fee of \$98.00 if the applicant chooses to receive technical updates from the Department by facsimile transmission.
- A. Except as provided in R9-14-608, an applicant shall submit the following fees to the Department with each application for an initial or renewal license:
 - 1. The cumulative method and instrumentation fees for each laboratory, as determined according to Tables 1 and 2 in Exhibit I;
 - 2. The following application fees:
 - a. If applying for a single license for a single laboratory, which may include multiple laboratories located on contiguous grounds and having the same owner, the following fee:

 - i. For a Level I license, \$1,677;ii. For a Level II license, \$2,130; or
 - iii. For a Level III license, \$2,348; or
 - b. If applying for a single license for multiple laboratories not located on contiguous grounds, the following fee for each laboratory:
 - i. For a Level I license, \$1,442;
 - ii. For a Level II license, \$1,895; and
 - iii. For a Level III license, \$2,130;
 - An administrative fee of \$130 for the proficiency testing to occur during the license period; and
 - If applying for an out-of-state laboratory, an annual information update fee of \$126.
- F. A licensee that requests to change its license by adding a parameter to the license before its expiration date shall pay all applicable licensing fees. A licensee may delete parameters at no charge three times during a license period. Thereafter, the Department shall charge \$13.00 per parameter for processing each deletion.
- **B.** The fees paid to the Department under this Article are nonrefundable, unless A.R.S. § 41-1077 applies.

R9-14-608. <u>Installment</u> Payment of Fees <u>by Small Businesses</u>

- A. Upon receipt of a license application, the Department calculates the amount owed by the applicant by adding together the following:
 - 1. The fees for the methods and instruments for which licensure is requested on the application, as provided in A.A.C. R9-14-607(C):
 - 2. The proficiency evaluation audit fee, as provided in A.A.C. R9-14-607(D); and
 - 3. The technical update fee, as provided in A.A.C. R9-14-607(E), if the applicant is applying for an out-of-state laboratory and has requested to receive technical updates from the Department by facsimile transmission.
 - A. A licensee may, for license renewal, pay the fees calculated under R9-14-607(A)(1), (3), and (4) to the Department in 12 or fewer installments if the laboratory owner is a small business.
 - B. A licensee who desires to make payments in installments as described in subsection (A) shall indicate this on the

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application for license renewal and shall indicate a monthly, bimonthly, or quarterly schedule for the payments, which shall result in full payment within 12 or fewer months.

- **B.C.** If a laboratory is owned by a small business, the applicant may submit the amount calculated under subsection (A) to the Department in 12 equal installments, with A licensee making installment payments shall submit the first installment billed by to the Department as described in subsection (C) along with the application for license renewal and the application fee calculated under R9-14-607(A)(2), and an each subsequent installment due on the first day of each month for 11 months thereafter on a monthly, bimonthly, or quarterly basis, as indicated on the application, or until the fees are paid in full, whichever comes first.
- C. After calculating the total fee as described in subsection (A), the Department shall send the applicant a notice of administrative deficiencies and a bill showing the following amount due:
 - 1. If the laboratory is owned by a small business, the amount of the first installment; or
 - 2. If the laboratory is not owned by a small business, the total amount calculated under subsection (A).
- **D.** A licensee shall ensure that each installment payment is:
 - 1. Paid by the first day of the month in which it is due; and
 - 2. At least equal to the amount calculated by dividing the total fees due under R9-14-607(A)(1), (3), and (4) by the number of payments indicated on the application for license renewal.
- **D.E.** If an applicant or a licensee for a laboratory owned by a small business fails to submit an installment within seven days from after its due date, the Department shall charge a \$20.00 \$50 fee for processing the late payment. If an applicant or licensee for a laboratory owned by a small business fails to submit an installment within 30 days from its due date, the Department may initiate action under A.R.S. § 36-495.09.
- F. If a licensee fails to submit an installment within 30 days after its due date, the Department may initiate action under A.R.S. § 36-495.09.

R9-14-609. Proficiency Evaluation Testing

- A. Once At least once in each 12-month period, or and more often if requested by the Department, each laboratory shall licensee or applicant that performs drinking water compliance testing shall have at least one laboratory analyst demonstrate proficiency in drinking water compliance testing by participating in a proficiency evaluation audit testing provided by the Principal State Laboratory System Department, the EPA, or a proficiency evaluation testing service.
- **B.** The laboratory Each proficiency testing for drinking water compliance testing shall analyze include at least one proficiency evaluation samples testing sample for each parameter for which an initial license or renewal license has been issued or requested and for which proficiency evaluation samples are available. If more than one method is used to test for an analyte, a different lot shall be used for each method.
- C. At least once in each 12-month period, and more often if requested by the Department, each licensee or applicant that performs non-drinking-water compliance testing shall have at least one laboratory analyst demonstrate proficiency in non-drinking-water compliance testing by participating in proficiency testing provided by the Department, the EPA, or a proficiency testing service, if proficiency testing is available.
- **D.** Each proficiency testing for non-drinking-water compliance testing shall include at least one proficiency testing sample for each parameter for which an initial license or renewal license has been issued or requested and for which proficiency testing samples are available.
- **E.** For a laboratory to To demonstrate proficiency for a parameter, test results reported by the laboratory for the parameter shall be within acceptance eriteria limits established by:
 - 1. For drinking water inorganic chemistry parameters, the EPA, as provided in 40 CFR 141.23;
 - 2. For drinking water organic chemistry parameters, the EPA, as provided in 40 CFR 141.24;
 - 3. For lead or copper in drinking water, the EPA, as provided in 40 CFR 141.89;
 - 4. For disinfection byproducts in drinking water, the EPA, as provided in 40 CFR 141.131; and
 - 5. For other parameters, the Principal State Laboratory System EPA or the proficiency evaluation testing service.
 - 1. To maintain a license for the methods listed for chemistry in A.A.C. R9-14-611, a laboratory shall demonstrate proficiency as described in subsection (A) by participating, every 12 months, in a water supply proficiency evaluation audit as required by the EPA under the Safe Drinking Water Act, 42 U.S.C. §§ 300f to 300j-26.
 - 2. To maintain a license for the methods listed for chemistry in A.A.C. R9-14-612 and R9-14-613, a laboratory shall demonstrate proficiency as described in subsection (A) by participating, every 12 months, in a water pollution proficiency evaluation audit as required by the EPA under the Clean Water Act, 33 U.S.C. §§ 1251-1387.
- **F.** A licensee or applicant shall ensure that:
 - 1. Each proficiency testing sample accepted at the licensee's or applicant's laboratory is analyzed at the licensee's or applicant's laboratory;
- **B.**2. A laboratory analyst shall test each <u>Each</u> proficiency evaluation testing sample is tested within the holding times required for its parameter, and shall use <u>using</u> the same procedures and techniques employed for routine sample testing, and calculating the holding time from the time the sample seal is broken or as indicated in the instructions accompanying the sample;
- C-3. The A proficiency evaluation testing service shall provide the provides proficiency evaluation testing results directly to

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the Department.;

- 4. If proficiency testing is provided by the Department, the licensee or applicant submits to the Department payment for the actual costs of the proficiency testing materials; and
- 5. If proficiency testing is not provided by the Department or the EPA, the licensee or applicant selects a proficiency testing service and contracts with and pays the proficiency testing service directly for proficiency testing.
- **D.G.** The Department may submit blind proficiency evaluation audit testing samples to a licensed laboratory at any time during the license period.
- E. If a proficiency evaluation audit is provided by the Principal State Laboratory System, a licensee or an applicant shall submit to the Department payment for the actual costs of the proficiency evaluation audit materials.
- **F.** If a proficiency evaluation audit is not provided by the Principal State Laboratory System, a licensee or an applicant shall select a proficiency evaluation service from a list provided by the Department. A licensee or an applicant shall contract with and pay the proficiency evaluation service directly for a proficiency evaluation audit.

R9-14-610. Approved Methods and References

- **A.** A licensee <u>or applicant</u> shall ensure that compliance testing is performed according to an approved method <u>or an alternate</u> method and may use method alterations approved by the <u>Director Department</u> under subsection (B) (C).
- B. The approved methods listed by parameter in R9-14-611 through R9-14-614 Exhibit I, Table 1 are found in the following references, which are incorporated by reference with the modifications described below; and are on file with the Department—and the Office of the Secretary of State. This incorporation by reference contains; include no future editions or amendments, and are available as provided below. The references published by the EPA, the U.S. Department of Energy, the U.S. Department of Health and Human Services, and the U.S. Department of the Interior are available from the National Technical Information Service, 5285 Prt. Royal Rd., Springfield, VA 22161. The other references are available as provided below.

Key Reference

- A Environmental Monitoring and Support Laboratory–Cincinnati, EPA, Pub. No. EPA-600/4-79-020, Methods for Chemical Analysis of Water and Wastes (rev. March 1983), available at http://nepis.epa.gov/pubtitleord.htm.
- A1 Environmental Monitoring and Support Laboratory–Cincinnati, EPA, Pub. No. EPA/600/R-94/111, Methods for the Determination of Metals in Environmental Samples: Supplement I (May 1994), available at http://nepis.epa.gov/pubtitle-ord.htm.
- A2 Environmental Monitoring Systems Laboratory, EPA, Pub. No. EPA/600/R-93/100, Methods for the Determination of Inorganic Substances in Environmental Samples (August 1993), available at http://nepis.epa.gov/pubtitleord.htm, modified to increase the maximum holding time from 48 hours to 14 days at 4° C for chlorinated, unacidified drinking water samples collected for determination of nitrate.
- A3 Technicon Industrial Systems, Industrial Method No. 380-75WE, Fluoride in Water and Wastewater (July 1977), available from Bran & Luebbe Analyzing Inc., 1025 Busch Pkwy., Buffalo Grove, IL 60089.
- A4 Office of Water, EPA, Pub. No. <u>EPA-821-R-99-005 EPA-821-R-02-019</u>, Method 1631, Revision <u>B E</u>: Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Atomic Fluorescence Spectrometry (<u>May 1999 August 2002</u>), available at http://www.epa.gov/waterscience/methods/1631.html.
- A5 Technicon Industrial Systems, Industrial Method No. 129-71W, Fluoride in Water and Wastewater (December 1972), available from Bran & Luebbe Analyzing Inc., 1025 Busch Pkwy., Buffalo Grove, IL 60089.
- A6 Herbert P. Wagner et al., EPA, Pub. No. EPA 815-B-01-001, Method 317.0: Determination of Inorganic Oxyhalide Disinfection By-Products in Drinking Water Using Ion Chromatography with the Addition of a Postcolumn Reagent for Trace Bromate Analysis (rev. 2.0 July 2001), available at www.epa.gov/safewater/methods/sourcalt.html.
- A7 Herbert P. Wagner et al., EPA, Pub. No. EPA 815-R-05-007, Method 326.0: Determination of Inorganic Oxyhalide Disinfection By-Products in Drinking Water Using Ion Chromatography Incorporating the Addition of a Suppressor Acidified Postcolumn Reagent for Trace Bromate Analysis (rev. 1.0 June 2002), available at www.epa.gov/safewater/methods/sourcalt.html.
- A8 Teri A. Dattilio et al., EPA, Pub. No. EPA 815-R-05-008, Method 327.0: Determination of Chlorine Dioxide and Chlorite Ion in Drinking Water Using Lissamine Green B and Horseradish Peroxidase with Detection by Visible Spectrophotometry (rev. 1.1 May 2005), available at www.epa.gov/safewater/methods/sourcalt.html.
- A9 B.B. Potter and J.C. Wimsatt, EPA, Pub. No. EPA/600/R-05/055, Method 415.3: Determination of Total Organic Carbon and Specific UV Absorbance at 254 nm in Source and Drinking Water (rev. 1.1 February 2005), available at www.epa.gov/nerlcwww/ordmeth.htm.
- B Herman L. Krieger, EPA, Pub. No. EPA-600/4-75-008, Interim Radiochemical Methodology for Drinking Water (March 1976), available from National Technical Information Service, 5285 Prt. Royal Rd., Springfield, VA 22161.
- C American Public Health Association et al., Standard Methods for the Examination of Water and Wastewater (19th ed. 1995), available from American Public Health Association, 1015 15th 800 I St., NW, Washington, DC 20005 20001.
- C1 Hach Company, Hach Water Analysis Handbook (3rd ed. 1997), available from Hach Company, P.O. Box 389, Loveland, CO 80539-0389.
- C2 American Public Health Association et al., Standard Methods for the Examination of Water and Wastewater (20th ed.

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1998), available from American Public Health Association, 800 I St., NW, Washington, DC 20001, modified to require:

- <u>a.</u> For drinking water TOC testing:
 - i. That inorganic carbon be removed from each TOC sample before analysis,
 - ii. That each TOC sample not be filtered before analysis,
 - iii. That the pH of each TOC sample be checked and documented before analysis and that the test result be qualified in the final report if the sample pH was >2, and
 - iv. That each acidified TOC sample be analyzed within 28 days; and
- b. For drinking water DOC testing:
 - i. That each DOC sample be filtered through a 0.45 um pore-diameter filter as soon as practical and no later than 48 hours after sampling.
 - ii. That each DOC sample be acidified after filtration to achieve a pH 2 with minimal addition of the acid specified in the method or by the instrument manufacturer,
 - iii. That each acidified DOC sample be analyzed within 28 days after sample collection,
 - iv. That inorganic carbon be removed from each DOC sample before analysis,
 - v. That water passed through the filter before filtration of the DOC sample serve as the filtered blank, and
 - vi. That the filtered blank be analyzed using procedures identical to those used for analysis of the DOC sample and have DOC < 0.5 mg/L;
- c. For drinking water testing of UV-absorbing organic constituents:
 - i. That UV absorption be measured at 253.7 nm or 254 nm,
 - ii. That each UV sample be filtered through a 0.45 um pore-diameter filter before analysis,
 - iii. That the pH of UV samples not be adjusted, and
 - iv. That each UV sample be analyzed as soon as practical and no later than 48 hours after sampling; and
- d. For drinking water disinfection byproducts testing by micro liquid-liquid extraction/GC-ECD using method 6251B, that each sample be extracted within 14 days after sample collection.
- D Environmental Monitoring Systems Laboratory–Cincinnati, EPA, Pub. No. EPA/600/4-88/039, Methods for the Determination of Organic Compounds in Drinking Water (rev. July 1991), available at http://nepis.epa.gov/pubtitleord.htm.
- D1 Environmental Monitoring Systems Laboratory–Cincinnati, EPA, Pub. No. EPA/600/4-90/020, Methods for the Determination of Organic Compounds in Drinking Water: Supplement I (July 1990), available at http://nepis.epa.gov/pubtitle-ord.htm.
- D2 Environmental Monitoring Systems Laboratory–Cincinnati, EPA, Pub. No. EPA/600/R-92/129, Methods for the Determination of Organic Compounds in Drinking Water: Supplement II (August 1992), available at http://nepis.epa.gov/pubtitle-ord.htm.
- D3 National Exposure Research Laboratory–Cincinnati, EPA, Pub. No. EPA/600/R-95/131, Methods for the Determination of Organic Compounds in Drinking Water: Supplement III (August 1995), available at http://nepis.epa.gov/pubtitle-ord.htm.
- D4 Office of Ground Water and Drinking Water Technical Support Center, EPA, Pub. No. <u>EPA 815-B-97-001 EPA 815-R-05-004</u>, Manual for the Certification of Laboratories Analyzing Drinking Water: Criteria and Procedures Quality Assurance (4th ed. <u>March 1997 5th ed. January 2005)</u>, available at http://www.epa.gov/ogwdw/labcert/labindex.html.
- D5 J.W. Munch and W.J. Bashe, EPA, Method 549.2: Determination of Diquat and Paraquat in Drinking Water by Liquid-Solid Extraction and High Performance Liquid Chromatography with Ultraviolet Detection (rev. 1 June 1997), available at http://www.nemi.gov.
- D6 Anne M. Pawlecki-Vonderheide and David J. Munch, EPA, Method 515.3: Determination of Chlorinated Acids in Drinking Water by Liquid-Liquid Extraction, Derivatization and Gas Chromatography with Electron Capture Detection (rev. 1 July 1996), available at http://www.nemi.gov.
- D7 M.V. Bassett et al., EPA, Pub. No. EPA 815-B-01-002, Method 531.2: Measurement of N-Methylcarbamoyloximes and N-Methylcarbamates in Water by Direct Aqueous Injection HPLC with Postcolumn Derivatization (rev. 1.0 September 2001), available at http://www.nemi.gov.
- D8 S.C. Wendelken et al., EPA, Method 515.4: Determination of Chlorinated Acids in Drinking Water by Liquid-Liquid Microextraction, Derivatization, and Fast Gas Chromatography with Electron Capture Detection (rev. 1.0 April 2000), available at http://www.nemi.gov.
- <u>D9</u> Ed K. Price et al., EPA, Pub. No. 815-R-05-005, Method 527: Determination of Selected Pesticides and Flame Retardants in Drinking Water by Solid Phase Extraction and Capillary Column Gas Chromatography/Mass Spectrometry (GC/MS) (rev. 1.0 April 2005), available at http://www.epa.gov/safewater/methods/sourcalt.html.
- D10J.W. Munch, EPA, Pub. No. 600/R-05/052, Method 529: Determination of Explosives and Related Compounds in Drinking Water by Solid Phase Extraction and Capillary Column Gas Chromatography/Mass Spectrometry (GC/MS) (rev. 1.0 September 2002), available at http://www.epa.gov/nerlcwww/ordmeth.htm.
- D11 J.A. Shoemaker and M.V. Bassett, EPA, Pub. No. EPA/600/R-05/053, Method 535: Measurement of Chloroacetanilide and Other Acetamide Herbicide Degradates in Drinking Water by Solid Phase Extraction and Liquid Chromatography/ Tandem Mass Spectrometry (LC/MS/MS) (version 1.1 April 2005), available at http://www.epa.gov/nerlcwww/ord-

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meth.htm.

- D12J.W. Munch and M.V. Bassett, EPA, Pub. No. EPA/600/R-05/054, Method 521: Determination of Nitrosamines in Drinking Water by Solid Phase Extraction and Capillary Column Gas Chromatography with Large Volume Injection and Chemical Ionization Tandem Mass Spectrometry (MS/MS) (version 1.0 September 2004), available at http://www.epa.gov/nerlcwww/ordmeth.htm.
- <u>D13M.M.</u> Domino et al., EPA, Pub. No. EPA 815-B-03-002, Method 552.3: Determination of Haloacetic Acids and Dalapon in Drinking Water by Liquid-Liquid Extraction, Derivatization, and Gas Chromatography with Electron Capture Detection (rev. 1.0 July 2003), available at www.epa.gov/safewater/methods/sourcalt.html.
- E 40 CFR Part 136 app. A (1998 July 2005), available at http://www.access.gpo.gov/nara/cfr/cfr-table-search.html.
- E1 Office of Water Engineering and Analysis Division, EPA, Pub. No. EPA-821-R-93-010-A, Methods for the Determination of Nonconventional Pesticides in Municipal and Industrial Wastewater: Volume I (rev. 1 August 1993), available from National Technical Information Service, 5285 Prt. Royal Rd., Springfield, VA 22161.
- F Office of Solid Waste and Emergency Response, EPA, Pub. No. SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (3rd ed. 1986), as amended by & Update I, July 1992; Update IIA, August 1993; Update II, September 1994; Update IIB, January 1995; Update III, December 1996; Update IIIA, June 1999; and Update IIIB, July 2005), available from National Technical Information Service, 5285 Prt. Royal Rd., Springfield, VA 22161, and at http://www.epa.gov/epaoswer/hazwaste/test/main.htm.
- F1 Thomas A. Bellar and James J. Lichtenberg, EPA, Pub. No. EPA-600/4-81-045, The Determination of Polychlorinated Biphenyls in Transformer Fluid and Waste Oils (September 1982), available at http://nepis.epa.gov/pubtitleord.htm.
- F2 EPA, Method 5035A: Closed-System Purge-and-Trap and Extraction for Volatile Organics in Soil and Waste Samples (draft rev. 1 July 2002), available at http://www.epa.gov/epaoswer/hazwaste/test/new-meth.htm.
- F3 EPA, Method 4025: Screening for Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans (PCDD/Fs) by Immunoassay (rev. 0 October 2002), available at http://www.epa.gov/epaoswer/hazwaste/test/new-meth.htm.
- F4 EPA, Method 3570: Microscale Solvent Extraction (MSE) (rev. 0 November 2002), available at http://www.epa.gov/epaoswer/hazwaste/test/new-meth.htm.
- F5 EPA, Method 3511: Organic Compounds in Water by Microextraction (rev. 0 November 2002), available at http://www.epa.gov/epaoswer/hazwaste/test/new-meth.htm.
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- F7 EPA, Method 8015D: Nonhalogenated Organics Using GC/FID (rev. 4 June 2003), available at http://www.epa.gov/epaoswer/hazwaste/test/new-meth.htm.
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 - b. That the test result be qualified in the final report if the sample was not preserved with 50 mg of ethylenediamine per liter of sample at the time of sampling.
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- Z11 OI Analytical/ALPKEM, Nitrogen, Total Kjeldahl, Method PAI-DK02 (Block Digestion, Steam Distillation, Colorimetric Detection) (rev. December 22, 1994), available from OI Analytical/ALPKEM, P.O. Box 9010, College Station, TX 77842.
- Z12 OI Analytical/ALPKEM, Nitrogen, Total Kjeldahl, Method PAI-DK03 (Block Digestion, Automated FIA Gas Diffusion) (rev. December 22, 1994), available from OI Analytical/ALPKEM, P.O. Box 9010, College Station, TX 77842.
- Z13 EPA, Pub. No. EPA-821-R-02-012, Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (5th ed. October 2002), available at www.epa.gov/waterscience/WET/disk2/.
- **B.C.**If an approved method or existing alternate method is not available for a particular parameter, or a different method or method alteration is required or authorized to be used for a particular parameter by the EPA, ADEQ, the U.S. Food and Drug Administration, or 9 A.A.C. 8, a licensee may petition the Department for request approval of a new an alternate

method or method alteration.

- 1. For a <u>an alternate</u> method or method alteration required or authorized by the EPA, ADEQ, the U.S. Food and Drug Administration, or 9 A.A.C. 8, the <u>petition request</u> shall include:
 - a. The name, address, and telephone number of the licensee submitting the petition request;
 - b. The name, address, and telephone number of the laboratory for which approval of the <u>alternate</u> method or method alteration is requested;
 - c. Identification of the parameter for which approval of the alternate method or method alteration is requested; and
 - d. Reference to the EPA, ADEQ, U.S. Food and Drug Administration, or 9 A.A.C. 8 requirement or authorization for the use of the <u>alternate</u> method or method alteration for which approval is requested; and
 - e. An alternate method or method alteration approval fee of \$50 payable to the Arizona Department of Health Services in the form of a certified check, business check, money order, or credit card payment.
- 2. For a <u>an alternate</u> method or method alteration that is not required or authorized by the EPA, ADEQ, the U.S. Food and Drug Administration, or 9 A.A.C. 8, the petition request shall include:
 - a. The name, address, and telephone number of the licensee submitting the petition request;
 - b. The name, address, and telephone number of the laboratory for which approval of the <u>alternate</u> method or method alteration is requested;
 - c. Identification of the parameter for which approval of the alternate method or method alteration is requested; and
 - d. Written justification for using the <u>alternate</u> method or method alteration for which approval is requested, including the following:
 - i. A detailed description of the <u>alternate</u> method or method alteration;
 - ii. References to published or other studies confirming the general applicability of the <u>alternate</u> method or method alteration to the parameter for which its use is intended;
 - iii. Reference to the EPA, ADEQ, U.S. Food and Drug Administration, or 9 A.A.C. 8 requirement to test the parameter; and
 - iv. Data that demonstrate the performance of the <u>alternate</u> method or method alteration in terms of accuracy, precision, reliability, ruggedness, ease of use, and ability to achieve a detection limit appropriate for the proposed use of the <u>alternate</u> method or method alteration; and
 - e. An alternate method or method alteration approval fee of \$50 payable to the Arizona Department of Health Services in the form of a certified check, business check, money order, or credit card payment.
- 3. Before approving a new an alternate method or method alteration that is not required or authorized by the EPA, ADEQ, the U.S. Food and Drug Administration, or 9 A.A.C. 8, the Department may require that the alternate method or method alteration be performed by at a laboratory designated by the Department to verify that, using the parameter for which its use is intended, the alternate method or method alteration produces data that comply with subsection (BC)(2)(d)(iv).
- 4. The Department may approve a new an alternate method or method alteration that is not required or authorized by the EPA, ADEQ, the U.S. Food and Drug Administration, or 9 A.A.C. 8 if the Department determines that:
 - a. One of the following:
 - i. Use of the alternate method or method alteration is required or authorized by the EPA, ADEQ, the U.S. Food and Drug Administration, or 9 A.A.C. 8; or
 - ii. use Use of the alternate method or method alteration is justified as described in subsection (BC)(2)(d); and
 - b. If the alternate method or method alteration pertains to drinking water compliance testing, the EPA concurs that the alternate method or method alteration may be used.

R9-14-611. Drinking Water Sample Methods Compliance Testing

A. A laboratory that conducts compliance testing of drinking water shall follow the guidelines in Key Reference D4, listed in R9-14-610(A), excluding requirements for laboratory personnel education and experience. In addition, when conducting compliance testing of a drinking water sample for a listed contaminant or group of contaminants, a laboratory shall use at least one of the corresponding methods listed below, unless the laboratory uses an alternate method approved by the Department for such testing under R9-14-610(B). Where two methods listed are joined by the word "and," a laboratory shall use both methods listed. To locate the source of each method listed, cross reference the capital letter listed under the term "Key" below to the corresponding key-reference list in R9-14-610(A).

A licensee for a laboratory at which drinking water compliance testing is performed shall ensure that:

- 1. The laboratory is operated in compliance with the guidelines in Key Reference D4, excluding the requirements for laboratory personnel education and experience;
- 2. Each drinking water sample for Arizona compliance testing is analyzed using an approved method:
 - a. <u>Listed under Exhibit I, Table 1, Section A, Drinking Water Parameters; or</u>
 - b. Approved for drinking water compliance testing under R9-14-610(C); and
- 3. If the licensee desires to be licensed to perform testing for vinyl chloride, the licensee also obtains licensure to perform testing for each of the analytes listed in 40 CFR 141.61(a)(2)-(21).

B. -1.	Microbiology: Total Coliforms:	Key	Method
-1. a.	Multiple Tube	C	9221B and C
		C1	8001
<u>—b.</u>	Membrane Filter	C	9222B, C
с.	Colilert	C	9223B
<u>—d.</u>	Colisure	\mathbf{T}	Broadway et al.
<u>—е.</u>	Presence - Absence	C	9221D
_2 .	Heterotrophic Plate Count	C	9215B
_3 .	Escherichia coli	X	Tube Procedure
			Membrane Filter Procedure
-4.	Fecal coliform	C	9221E, 9222D
		C1	8001
_5 .	Viruses	<u>P2</u>	600/R-95/178
-6.	Giardia and Cryptosporidium	<u>P2</u>	600/R-95/178
C.	Sample preparation for metals:	Key	Method
-1.	Preliminary Filtration	C	3030B
	Acid Extractable Metals	E	3030C
		•	5030C
-3 .	Acid Digestion:		
—а.	Nitric Acid	C	3030E
b .	Nitric Acid/Hydrochloric Acid	C	3030F
с.	Nitric Acid/Sulfuric Acid	C	3030G
d.	Nitric Acid/Perchloric Acid	C	3030H
е.	Nitric Acid/Perchloric Acid/Hydrofluoric- Acid	C	3030I
-4 .	Microwave Assisted Digestion	C	3030 K
D.	Inorganic chemical and physical characteristics:	Key	Method
1 .	Alkalinity	C	2320B
	Timerimey	Į	D1067-92B
		J	I-1030-85
_2 .	Aluminum	A1	200.7, 200.8, 200.9
2.	1110111110111	C	3111D, 3113B, 3120B
		Ţ	I-3051-85
_3 .	Antimony	A1	200.8, 200.9
-3.	rinding	C	3113B
		Ţ	D3697-92
-4.	Arsenic	1 A1	200.7, 200.8, 200.9
-4.	Misonic	C	3113B, 3114B, 3120B
		Į.	энэв, энчв, этгов D2972-93B, С
_	Ashastas		· · · · · · · · · · · · · · · · · · ·
-5 .	Asbestos	111	100.1
	Davison.	<u>H2</u>	100.2
-6.	Barium	A1	200.7, 200.8
7	D 11.	C	3111D, 3113B, 3120B
-7.	Beryllium	A1	200.7, 200.8, 200.9

		C	3113B, 3120B
		Ī	D3645-93B
_8.	Bromate	A 2	300.1 300.1
-0. -9.	Bromide	A2	300.0, 300.1
	Cadmium	A1	200.7, 200.8, 200.9
-10.	Cudimum	C	3113B
-11.	Calcium	A1	200.7
	Carcium	C	3111B, 3120B, 3500-Ca D
		Į.	D511-93 A, B
-12.	Chloride	+ A2	300.0
-12.	Chioride	C	4110B, 4500-Cl-D
		Į	D4327-91
-13.	Chlorine	C	4500-Cl D, E, F, G, H, I
-15.	Chrorine	C1	8021, 8167, 8168, 8370
-14.	Chlorine Dioxide	C	4500-ClO ₂ -C, D, E
			2
-15.	Chlorite	A2	300.0, 300.1
-16.	Chromium, Total	A1	200.7, 200.8, 200.9
1.7		C	3113B, 3120B
-17.	Color	C	2120 B
-18.	Copper	A1	200.7, 200.8, 200.9
		C	3111B, 3113B, 3120B
10	~	I	D1688-90A, C
-19.	Corrosivity	C	2330B
-20.	Cyanide	A2	335.4
		C	4500-CN C, E, F, G
		I	D2036-91A, B
	~	Ţ	I-3300-85
-21.	Cyanide, Amenable	C	4 500-CN G
		I	D2036-91B
_22.	Fluoride	A2	300.0
		A3	380-75WE
		C	4110B, 4500-F B, C, D, E
		C1	8029
		I	D1179-93B, D4327-91
_23.	Hardness	A1	Sum of Ca and Mg by 200.7 as their
			carbonates
		C	2340B, C, Sum of Ca and Mg as their
			carbonates
-24.	Iron	A1	200.7, 200.9
		C	3111B, 3113B, 3120B
-25.	Lead	A1	200.8, 200.9
		C	3113B
		I	D3559-90D
-26.	Magnesium	A1	200.7, 200.8, 200.9
		C	3111B, 3120B
-27.	Manganese	A1	200.7, 200.8, 200.9
		C	3111B, 3113B, 3120B
-28.	Methylene Blue Active Substances	C	5540C
-29.	Mercury	A	245.2
		A1	200.8, 245.1
		C	3112B
		I	D3223-91
-30.	Nickel	A1	200.7, 200.8, 200.9
		C	3111B, 3113B, 3120B

	Notices	s of Final Rulemaking	<i>y</i> • y • • • • • • • • • • • • • • • • • • •
21	Nitara	A 2	200 0 252 2
-31.	Nitrate	A2 C	300.0, 353.2
			4110B, 4500-NO ₃ -D, E, F
22	ATT. II.	I	D3867-90A, B, D4327-91
-32.	Nitrite	A2	300.0, 353.2
		C	4110B, 4500-NO ₂ -B, E, F
		I	D3867-90A, B, D4327-91
-33.	Ortho-Phosphate	A2	300.0, 365.1
		I C	D515-88A, D4327-91
		î C	4110, 4500-P E, F
-34.	Ozone	÷ C	I-1601-85, I-2598-85, I-2601-90 4500-Q ₂ -B
-35.	pH (Hydrogen Ion)	A	150.1, 150.2
		C	4500-H B
		C1	8156 D1202 84
-36.	Residue, Filterable	E E	D1293-84 2540C
-30. - 37.	Selenium	41	200.8, 200.9
-37.	Selemum	C	3113B, 3114B
		Į	D3859-93A, B
-38.	Silica	A1	200.7
50.	Silicu	C	4500-Si D, E, F, 3120B
		Ī	D859-88
		J	I-2700-85
_39.	Silver	A1	200.7, 200.8, 200.9
		C	3111B, 3113B, 3120B
		J	I-3720-85
-40.	Sodium	A1	200.7
		C	3111B
-41.	Specific Conductance	C	2510B
		C1	8160
		Ī	D1125-91A
-42.	Strontium	A1	200.7
		C	3500-Sr B, C, D
-43.	Sulfate	A2	300.0, 375.2
		C	4110B, 4500-SO ₄ -C, D, F
		I	D4327-91
-44.	Temperature, Degrees Celsius	C	2550B
-45.	Thallium	A1	200.8, 200.9
-46.	Total Organic Carbon	C	5310B, C, D
-47.	Turbidity: Nephelometric	A2	180.1
10	Illenovialet Abaarbina Organia Constituenta	C	2130B
-48. -49.	Ultraviolet Absorbing Organic Constituents	<u>C</u>	5910B
-49.	Zine	A1 C	200.7, 200.8 3111B, 3120B
E.	Organic chemicals:	Key	Method
-1.	Total Trihalomethanes	D3	502.2, 524.2, 551.1
-2.	-Volatile Organics	D3	502.2, 524.2 502.2, 524.2
-2. - 3.	Chlorinated Pesticides	D3	505, 508, 508.1, 525.2
<u>-4.</u>	Polychlorinated Biphenyls	Ð	508A
	7 · · · · · · · · ·	D3	505, 508
-5 .	Chlorophenoxy Herbicides	Đ	515.1
	-	D2	552.1, 555
		D3	515.2

-6.	1,2-Dibromoethane and 1,2-Dibromo-3-Chloropropane	D3	504.1, 551.1
_7 .	Nitrogen and Phosphorus Pesticides	D3	507, 508.1, 525.2
-8.	Base/Neutrals and Acids	D3	525.2
<u>9.</u>	Carbamates	D3	531.1
-10.	Dioxins and Furans	E	1613
-11.	Glyphosate	D1	547
-12.	Endothall	D2	548.1
<u> 13.</u>	Diquat and Paraquat	D5	549.2
<u>-14.</u>	Polycyclic Aromatic Hydrocarbons	D1	550, 550.1
11.	1 oryeyene momade rry droedrooms	D3	525.2
-15.	Disinfectant By-products and Chlorinated	D3	551.1
	Solvents		
-16.	Haloacetic Acids	C	6251B
		D2	552.1
		D3	551.1, 552.2
-17.	Phthalate Esters and Adipates	D3	506, 525.2
-18.	Benzidines and Nitrogen Pesticides	D2	553
<u> 19.</u>	Carbonyl Compounds	D2	554
-20.	Chlorinated Acids	D2	555
		D6	515.3
F.	Radiochemical:	Key	Method
_1 .	Gross Alpha	B	Gross Alpha
	1	C	7110B, 7110C
		J1	R-1120-76
		L	900
		¥	00-01, 00-02
		₩	Gross Alpha
_2.	Gross Beta	₿	Gross Beta
		C	7110B
		J1	R-1120-76
		L	900
		¥	00-01
		₩	Gross Beta
_3 .	Radium-226	B	Radon Emanation, Precipitation Method
٠.		C	7500-Ra B, 7500-Ra C
		Ī	D2460-90, D3454-91
		1	R-1140-76, R-1141-76
		<u>L</u>	903, 903.1
		Ü	Ra 05
		¥	Ra-03, Ra-04
		W	Radium 226
<u>-4.</u>	Radium-228	B	Radium 228
	Rudium 220	E	7500-Ra D
		U	R-1142-76
		F	904
		¥	Ra-05
		₩	Radium 228
		X1	Radium 228
_5 .	Cesium	A I B	Cesium-134
 .	Солин	B C	Cesium-134 7500-Cs B, 7120
		€ #	7500-Сs В, 7120 R-1110-76, R-1111-76
			K-1110-/0, K-1111-/0 901, 901.1
		<u>L</u>	901, 901.1 4 <u>.5.2.3</u>
		U	4.3.4.3

		₩	Gamma Spectra
-6.	Iodine	₿	Precipitation Method, Distillation Method
		C	7500-I B, C, D, 7120
		Ī	D3649-91, D4785-93
		<u>L</u>	901.1, 902
		U	4.5.2.3
		₩	Gamma Spectra
-7.	Strontium	₿	Strontium
		C	7500-Sr B
		J1	R-1160-76
		L	905
		U	Sr-01, Sr-02
		¥	Sr-04
		₩	Strontium
-8.	Tritium	₿	Tritium
		C	7500-H B
		Ī	D4107-91
		J1	R-1171-76
		F	906
		¥	H-02
		₩	Tritium
<u>9.</u>	Uranium	C	7500-U-B, C
		Ī	D2907-91, D3972-90, D5174-91
		11	R-1180-76, R-1181-76,
			R-1182-76
		Ŧ	908, 908.1
		U	U-02, U-04
		¥	00-07
		₩	Uranium
-10.	Gamma Emitting Isotopes	C	7120, 7500-Cs B, 7500-I B
		L	901, 901.1, 902
		₩	Gamma Spectra
G.	Biological:	Key	Method
	Microscopic Particulate Analysis	P1	910/9-92-029

R9-14-612. Wastewater Sample Methods Compliance Testing

- A. When conducting compliance testing of a wastewater sample for a listed contaminant or group of contaminants, a laboratory shall use at least one of the corresponding methods listed below, unless the laboratory uses an alternate method approved by the Department for such testing under A.A.C. R9-14-610(B). Where two methods listed are joined by the word "and," a laboratory shall use both methods listed. To locate the source of each method listed, cross reference the capital letter listed under the term "Key" below to the corresponding key-reference list in A.A.C. R9-14-610(A). A licensee for a laboratory at which wastewater compliance testing is performed shall ensure that each wastewater sample for Arizona compliance testing is analyzed using an approved method:
 - 1. <u>Listed under Exhibit I, Table 1, Section B, Wastewater Parameters; or</u>
 - 2. Approved for wastewater compliance testing under R9-14-610(C).

В.	Microbiology:	Key	Method
ᆀ.	Fecal Coliforms:		
<u>—а.</u>	Multiple Tube Fermentation	C	9221E
<u>—b.</u>	Membrane Filter	C	9222D
		J	B-0050-85
_2.	Total Coliforms:		
a.	Multiple Tube Fermentation	C	9221B
<u>b.</u>	Membrane Filter	C	9222B
		Ţ	B-0025-77

_3 .	Fecal Streptococcus:		
a.	Multiple Tube Fermentation	C	9230B
<u>—b.</u>	Membrane Filter	C	9230C
		Ĵ	B-0055-85
-4 .	Viruses	C	9510
		₽	Methods for Virology
		<u>P2</u>	600/R-95/178
_5.	Giardia and Cryptosporidium	C	9711B
		<u>P2</u>	600/R-95/178
-6.	Ascaris lumbricoides	C	10550
		<u>P3</u>	UofA2000
_7 .	Common tapeworm	C	10550
-8.	Entamoeba histolytica	C	10550
C.	Inorganic chemicals, nutrients and demand:	Key	Method
1 .	Acidity	A	305.1
	·	C	2310B
		C1	8010
		I	D1067-92
_2 .	Alkalinity, Total	A	310.1, 310.2
	•	C	2320B
		I	D1067-92
		Ţ	I-1030-85, I-2030-85
_3 .	Aluminum	A	202.1, 202.2
		A1	200.7, 200.8, 200.9
		C	3111D, 3113B, 3120B
		J	I-3051-85
-4.	Ammonia	A	350.2, 350.3
		A2	350.1
		C	4500-NH3 B, C, D, E, F, G
		C1	8038
		I	D1426-93A, B
		Ţ	I-3520-85, I-4523-85
_5 .	Antimony	A	204.1, 204.2
	,	A1	200.7, 200.8, 200.9
		C	3111B, 3113B, 3120B
-6.	Arsenic	A	206.2, 206.3, 206.4, 206.5
		A1	200.7, 200.8, 200.9
		C	3113B, 3120B, 3500-As B, C
		C1	8013
		Į	D2972-93A, B, C
		Ţ	I-3060-85, I-3062-85
_7 .	Barium	A	208.1, 208.2
•		A1	200.7, 200.8
		C	3111D, 3113B, 3120B
		Į.	D4382-91
		Ţ	I-3084-85
		ਰ	1 300 1 03

	110	uces of Filial Kulo	emaking
-8.	Beryllium	A	210.1, 210.2
-0.	Berymun	A1	200.7, 200.8, 200.9
		C	3111D, 3113B, 3120B, 3500-Be D
		Į.	D3645-94(88)A, B, D4190-82(88)
		I.	1-3095-85
0	Diaghamical Oversan Damand	<u>.</u>	1-3093-83 4 05.1
_9.	Biochemical Oxygen Demand	A	
		C C1	5210B
		U	8043 I -1578-78
10	D		
-10.	Boron	A 1	212.3 200.7
		A1	
		C	3120B, 4500-B-B
11	D 11	J	I-3112-85
-11.	Bromide	A	320.1
		A2	300.0
		I	D1246-82(88)C
10		Ţ.	I-1125-85
-12.	Cadmium	A	213.1, 213.2
		A1	200.7, 200.8, 200.9
		C	3111B, C, 3113B, 3120B, 3500-Cd D
		Ī	D3557-90A, B, C, D, D4190-82(88)
		Ţ	I-3135-85, I-3136-85, I-1472-85
-13.	Calcium	A	215.1, 215.2
		A1	200.7
		\mathbf{c}	3111B, 3120B, 3500-Ca D
		C1	<u>8222</u>
		I	D511-93A, B
		Î	I-3152-85
-14.	Chemical Oxygen Demand	A	410.1, 410.2, 410.3
		A2	410.4
		C	5220C, D
		C1	8000, 8230
		I	D-1252-88A, B
		J	I-3560-85, I-3561-85, I-3562-85
-15.	Chloride	\mathbf{A}	325.1, 325.2, 325.3
		A2	300.0
		C	4 500-Cl B, C, E
		C1	8225
		I	D512-89A, B
		I	I-1183-85, I-1184-85, I-1187-85, I-2187- 85
-16.	Chlorine, Total Residual	\mathbf{A}	330.1, 330.2, 330.3, 330.4, 330.5
		C	4 500-Cl B, C, D, F, G
		C1	8167, 8168, 10014
		I	D1253-86(92)
-17.	Chromium, Hexavalent	A	218.4
		C	3111C, 3500-Cr D

		•	D1507.004
		I	D1687-92A
10		J	I-1230-85, I-1232-85
-18.	Chromium, Total	A	218.1, 218.2, 218.3
		A1	200.7, 200.8, 200.9
		C	3111B, C, 3113B, 3120B, 3500-Cr D
		C1	8023
		I	D4190-82(88)
10		Ţ	I-3236-85
-19.	Cobalt	A	219.1, 219.2
		A1	200.7, 200.8, 200.9
		C	3111B, C, 3113B, 3120B
		I	D3558-90A, B, C, D4190-82(88)
		Ţ	I-3239-85
-20.	Color	A	110.1, 110.2, 110.3
		C	2120B, C, E
		Î	I-1250-85
21.	Copper	A	220.1, 220.2
		A1	200.7, 200.8, 200.9
		C	3111B, C, 3113B, 3120B, 3500-Cu D, E
		C1	8506
		Ī	D1688-90A, B, C, D4190-82(88)
		Î	I-3270-85, I-3271-85
-22.	Cyanide, Amenable to Chlorination	A	335.1
		C	4 500-CN G
		Ī	D2036-91B
-23.	Cyanide, Available	¥	OIA-1677
-24.	Cyanide, Total	A	335.2, 335.3
		C	4 500-CN C, D, E
		Ī	D2036-91A
		Î	I-3300-85
-25.	Fluoride	A	340.1, 340.2, 340.3
		A2	300.0
		C	4 500-F B, C, D, E
		C1	8029
		Ī	D1179-93A, B
		Î	I-4327-85
-26.	Gold	A	231.1, 231.2
		C	3111B
-27.	Hardness	A	130.1, 130.2, Sum of Ca and Mg as their carbonates
		A1	200.7
		C	2340B, C
		C1	8226
		I	D1126-86(92)
		J	I-1338-85
-28.	Iridium	A	235.1, 235.2
		C	3111B

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-29.	Iron	A	236.1, 236.2		
		A1	200.7, 200.9		
		C	3111B, C, 3113B, 3120B, 3500-Fe D		
		C1	8008		
		Ī	D1068-90 A, B, C, D, D4190-82(88)		
		Ţ	I-3381-85		
-30.	Kjeldahl, Total Nitrogen	A	3 51.1, 351.3, 351.4		
		A2	351.2		
		C	Combination of 4500-N _{org} B, C and 4500-		
			NH ₃ -C, D, F, G		
		I	D3590-89A, B		
		J	I-4551-78		
-31.	Lead	A	239.1, 239.2		
		A1	200.7, 200.8, 200.9		
		C	3111B, C, 3113B, 3120B, 3500-Pb D		
		C1	8033		
		I	D3559-90A, B, C, D, D4190-82(88)		
		Ţ	I-3399-85		
-32.	Lithium	A1	200.7		
33.	Magnesium	A	242.1		
55.	magnesium	A1	200.7		
		C	3111B, 3120B, 3500-Mg D		
		Į.	D511-93B		
		Ţ	I-3447-85		
-34.	Manganese	A	243.1, 243.2		
-31.	wanganese	A1	200.7, 200.8, 200.9		
		C	3111B, 3113B, 3120B, 3500-Mn D		
		C1	8034		
		₹ 	D858-90 A, B, C, D4190-82(88)		
		ŧ	D030-70 A, B, C, D4170-02(00)		
		Ţ	I-3454-85		
-35.	Mercury	A	245.2		
		A1	245.1		
		A4	1631		
		C	3112B		
		1	D3223-91		
		Ţ	I-3462-85		
-36.	Methylene Blue Active Substances	A	425.1		
		-			
		C	5540C		
		I	D2330-88		
-37.	Molybdenum	A	246.1, 246.2		
		A1	200.7, 200.8		
		C	3111D, 3113B, 3120B		
		J	I-3490-85		
-38.	Nickel	4 A	1-3/190-83 249.1, 249.2		
- 30.	i viokoi	=	217.1, 217.2		

		A1	200.7, 200.8, 200.9
		C	3111B, C, 3113B, 3120B, 3500-Ni D
		•	3111B, C, 3113B, 3120B, 3300 111B
		C1	8037
		I	D1886-90A, B, C, D4190-82(88)
		J	I-3499-85
39.	Nitrate	A	352.1, 353.1, 353.3
		A2	300.0, 353.2
		C	4500-NO ₃ -E, F, H
		I	D3867-90A, B
		Ĵ	I-4545-85
-40.	Nitrite	A	354.1
		A2	300.0
		C	4 500-NO₂-B -
		C1	8507
		Ĵ	<u>I-4540-85</u>
-41.	Oil and Grease and Total Petroleum- Hydrocarbons	A	413.1
		C	5520B
		C K1	33205 166 4
-42.	Organic Carbon, Total	A	415.1
-12.	Organic Caroon, Total	C	5310B, C, D
		Į.	D2579-93A, B
-43.	Orthophosphate	A	365.1, 365.2, 365.3
		A2	300.0
		C	4 500 P E, F
		C1	8048
		<u>I</u>	D515-88A
		Ţ	I-4601-85
-44.	Osmium	A	252.1, 252.2
4.~	0 5: 1 1	C	3111D
-45.	Oxygen, Dissolved	A	360.1, 360.2
		C	4 500-O-C, G
		C1	8229
		I	D888-92A, B
		Î	I-1575-78, I-1576-78
46.	Palladium	A	253.1, 253.2
		C	3111B
-47.	pH (Hydrogen Ion)	A	150.1
		C	4 500-H B
		C1	8156

		I	D1293-84(90)A, B
		Ţ	I-1586-85
-48.	Phenols	A	420.1, 420.2
10.	Thenels	C1	8047
-49.	Phosphorus, Total	A	365.2, 365.3, 365.4
		A2	365.1
		C	4 500-P B, E, F
		C1	8190
		I	D515-88A, B
		Ţ	I-4600-85
-50.	Platinum	A	255.1, 255.2
		C	3111B
-51.	Potassium	A	258.1
		A1	200.7
		C	3111B, 3120B, 3500-K D
		J	I-3630-85
-52.	Residue, Total	A	160.3
		C	2540B
		J	I-3750-85
-53.	Residue, Filterable	A	160.1
		C	2540C
		Ţ	I-1750-85
-54.	Residue, Nonfilterable	A	160.2
	,	C	2540D
		C1	8158
		J	I-3765-85
-55.	Residue, Settleable Solids	A	160.5
		C	2540F
-56.	Residue, Volatile	A	160.4
		Ţ	I-3753-85
-57.	Rhodium	A	265.1, 265.2
		C	3111B
-58.	Ruthenium	A	267.1, 267.2
		C	3111B
_59.	Selenium	A	270.2
		A1	200.7, 200.8, 200.9
		C	3113B, 3114B, 3120B
		I	D3859-93A, B
		Ĵ	I-3667-85
-60.	Silica, Dissolved	A	370.1
		A1	200.7
		C	3120B, 4500-Si D

		T	D050 00
		I	D859-88
		Ţ	I-1700-85, I-2700-85
-61.	Silver	A	272.1, 272.2
		A1	200.7, 200.8, 200.9
		C	3111B, C, 3113B, 3120B
		Î	I-3720-85
-62.	Sodium	A	273.1
		A1	200.7
		C	3111B, 3120B
		Ţ	I-3735-85
-63.	Sodium Azide	C	4110C
<i>c</i> 4			100.1
-64.	Specific Conductance	A	120.1
		C	2510B
		C1	8160
		Į	D1125-91A
		J	I-1780-85
-65.	Strontium	A1	200.7
		C	3111, 3120B, 3500-Sr B, C, D
-66.	Sulfate	A	375.1, 375.3, 375.4
		A2	300.0
		C	4500-SO ₄ -C, D
		C1	8051
		I	D516-90
-67.	Sulfide	A	376.1, 376.2
		C	4 500-S D, F
		C1	8131
		J	I-3840-85
-68.	Sulfite	A	377.1
		C	4500-SO ₃ -B
		C1	8071
-69.	Temperature Degrees Celsius	A	170.1
		C	2550B
70	771 11.		
-70.	Thallium	<u>A</u>	279.1, 279.2
		A1	200.7, 200.8, 200.9
		C	3111B, 3120B
-71.	Tin	A	282.1, 282.2
		A1	200.7, 200.9
		C	3111B, 3113B
		Ţ	I-3850-78
-72.	Titanium	A	283.1, 283.2
		C	3111D

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			100.1	
-73.	Turbidity	A2	180.1	
		C	2130B	
		I	D1889-88A	
		Ţ	I-3860-85	
-74.	Vanadium	A	286.1, 286.2	
		A1	200.7, 200.8	
		C	3111D, 3120B, 3500-V D	
		Ī	D3373-93, D4190-82(88)	
-75.	Zinc	A	289.1, 289.2	
		A1	200.7, 200.8, 200.9	
		C	3111B, C, 3120B, 3500-Zn E, F	
		C1	8009	
		I	D1691-90A, B, D4190-82(88)	
		J	I-3900-85	
D.	Bioassay:	Key	Method	
	Toxicity	M	600/4-90/027	
	•	M1	600/4-90/027F	
		N	600/4-89-001 and 600/4-89-001a	
		N1	600/4-91/002	
E.	Organic chemical:	Key	Method	
_1 .	Volatile Organics	D3	524.2	
		E	601, 602, 624, 1624	
		***	1000	
•		K2	1666	
-2.	Acrolein and Acrylonitrile	E	603, 624, 1624	
_3 .	Phenols-	E	604	
-4.	Benzidines	E	605	
_5 .	Phthalate Esters	E	606	
-6.	Nitrosamines	E	607	
-7.	Organochlorine Pesticides and	E	608	
	Polychlorinated Biphenyls			
-8 .	Nitroaromatics and Isophorone	E	609	
_9 .	Polynuclear Aromatic Hydrocarbons	E	610	
-10.	Haloethers	E	611	
-11.	Chlorinated Hydrocarbons	E	612	
-12.	-2, 3, 7, 8-Tetrachlorodibenzo-p-Dioxin	Ē	613	
-13.	Tetra-through Octa-Chlorinated Dioxins and Furans	E	1613	

-15. Base/Neutrals and Acids E 610, 625, 1625 -16. Carbamates and Urea Pesticides E 632 -17. Total Petroleum Hydrocarbons A 418.1 -18. Ethylene Glycol in Wastewater K BLS-188 -19. Organophosphorus Pesticides E1 614, 1657 F. Radiochemical: Key Method -1. Gross Alpha C 7110B I D1943-90 L 900 -2. Gross Beta C 7110B I D1890-90 L 900.0 -3. Total Radium C 7500-Ra B I D2460-90 L 903.0 -4. Radium-226 C 7500-Ra C I I D3454-91 L 903.1	-14.	Triazine Pesticides	£	619
17. Total Petroleum Hydrocarbons A 418.1 -18. Ethylene Glycol in Wastewater K BLS-188 -19. Organophosphorus Pesticides E1 614, 1657 F. Radiochemical: Key Method -1. Gross Alpha C 7110B I D1943-90 L 900 -2. Gross Beta C 7110B I D1890-90 L 900.0 -3. Total Radium C 7500-Ra B I D2460-90 L 903.0 -4. Radium-226 C 7500-Ra C I D3454-91	-15.	Base/Neutrals and Acids	E	610, 625, 1625
-18. Ethylene Glycol in Wastewater K BLS-188 -19. Organophosphorus Pesticides E1 614, 1657 F. Radiochemical: Key Method -1. Gross Alpha C 7110B I D1943-90 L 900 -2. Gross Beta C 7110B I D1890-90 L 900.0 L 900.0 1 900.0 1 1 02460-90 1 1 02460-90 1 1 02460-90 1 1 033.0 1 1 04451-91 1 1 04451-91 1 1 04451-91 1 1 04451-91 1 04451-91 1 04451-91 1 04451-91 1 04451-91 1 04451-91 1 04451-91 1 04451-91 1 04451-91 1 04451-91 1 04451-91 1 04451-91 1 04451-91 1 04451-91 1 04451-91 1 04451-91 1 04451-91 1 04451-91 1 04451-91 1<	-16.	Carbamates and Urea Pesticides	E	632
19. Organophosphorus Pesticides E1 614, 1657 F. Radiochemical: Key Method -1. Gross Alpha C 7110B -2. Gross Beta C 7110B -2. Gross Beta C 7110B -3. Total Radium C 7500-Ra B -4. Radium-226 C 7500-Ra C -4. Radium-226 C 7500-Ra C -5. I D3454-91 -6. C 7500-Ra C -6. C 7500-Ra C -7. D3454-91 -7. D3454-91 -7. D3454-91 -7. C 7500-Ra C -7. D3454-91 -7. C 7500-Ra C -7. D3454-91 -7. C 7500-Ra C -7. D3454-91 -7. D3454-91	-17.	Total Petroleum Hydrocarbons	A	418.1
F. Radiochemical: -1. Gross Alpha -2. Gross Beta -3. Total Radium -4. Radium-226 -4. Radiochemical: Key Method 7110B I D1943-90 L 900 L 900 L 900.0 -3. Total Radium C 7500-Ra B I D2460-90 L 903.0 C 7500-Ra C I D3454-91	-18.	Ethylene Glycol in Wastewater	K	BLS-188
-1. Gross Alpha I	-19.	Organophosphorus Pesticides	<u>E-1</u>	614, 1657
I D1943-90 L 900 -2. Gross Beta C 7110B I D1890-90 L 900.0 -3. Total Radium C 7500-Ra B I D2460-90 L 903.0 -4. Radium-226 C 7500-Ra C I D3454-91	F.	Radiochemical:	Key	Method
L 900	1.	Gross Alpha	C	7110B
-2. Gross Beta C 7110B I D1890-90 L 900.0 -3. Total Radium C 7500-Ra B I D2460-90 L 903.0 -4. Radium-226 C 7500-Ra C I D3454-91			I	D1943-90
I D1890-90 L 900.0 C 7500-Ra B I D2460-90 L 903.0 C 7500-Ra C I D3454-91			F	900
L 900.0 900.0	-2.	Gross Beta	C	7110B
-3. Total Radium C 7500-Ra B I D2460-90 L 903.0 -4. Radium-226 C 7500-Ra C I D3454-91			I	D1890-90
I D2460-90 L 903.0 -4. Radium-226 C 7500-Ra C I D3454-91			F	900.0
L 903.0 -4. Radium-226 C 7500-Ra C I D3454-91	-3 .	Total Radium	C	7500-Ra B
-4. Radium-226 C 7500-Ra C I D3454-91			Ī	D2460-90
I D3454-91			F	903.0
	-4.	Radium-226	C	7500-Ra-C
<u>L</u> 903.1			I	D3454-91
			F	903.1

R9-14-613. Solid, Liquid, and Hazardous Waste Sample Methods Compliance Testing

- A. When conducting compliance testing of a solid, liquid, or hazardous waste sample for a listed contaminant or group of contaminants, a laboratory shall use at least one of the corresponding methods listed below, unless the laboratory uses an alternate method approved by the Department for such testing under A.A.C. R9-14-610(B). Where two methods listed are joined by the word "and," a laboratory shall use both methods listed. To locate the source of each method listed, cross reference the capital letter listed under the term "Key" below to the corresponding key-reference list in R9-14-610(A). A licensee for a laboratory at which solid waste compliance testing is performed shall ensure that each solid waste sample for Arizona compliance testing is analyzed using an approved method:
 - 1. Listed under Exhibit I, Table 1, Section C, Solid Waste Parameters; or
 - 2. Approved by the Department for solid waste compliance testing under R9-14-610(C).
- **B.** A licensee for a laboratory at which solid waste compliance testing is performed using an 8000 series method from Key Reference F shall:
 - 1. If the method includes specific quality control requirements, follow the specific quality control requirements in the method:
 - 2. If the method does not include specific quality control requirements, follow all requirements in EPA, Method 8000C: Determinative Chromatographic Separations (rev. 3 March 2003), incorporated by reference, on file with the Department, including no future editions or amendments, and available at http://www.epa.gov/epaoswer/hazwaste/test/newmeth.htm; and
 - 3. If the method does not include specific sample extraction procedures, follow the procedures in the following from Key Reference F, as applicable:
 - a. Method 3500B,
 - b. Method 3600C, and
 - c. Method 5000.
- C. A licensee for a laboratory at which solid waste compliance testing is performed using a non-8000 series method from Key Reference F shall comply with the following from Key Reference F, as applicable according to the requirements of the specific method:
 - 1. Method 4000, and
 - 2. Method 7000A.
- D. A licensee for a laboratory at which solid waste compliance testing is performed using a method from Key Reference F shall comply with Chapters 1 through 8 of Key Reference F, as applicable according to the requirements of the specific method.

В.	Microbiology:	Key	Method
_1 .	Total Coliforms:	•	
a.	Multiple Tube Fermentation	F	9131
<u>b.</u>	Membrane Filter	F	9132
C.	Hazardous waste characteristics:	Key	Method
_1 .	Corrosivity:		
a.	pH determination	F	9040B, 9041A
b.	Corrosive to steel	F	1110
с.	Dermal	F	1120
2 .	Ignitability	F	1010, 1020A, 1030
-3 .	Reactivity	F	Reactivity
D.	Sample extraction procedures:	Key	Method
-1 .	Extraction Procedure Toxicity	F	1310A
-2.	Toxicity Characteristic Leaching Procedure	F	1311
-3.	Multiple Extraction Procedure	F	1320
-4.	Extraction Procedure for Oily Waste	£	1330A
_5 .	Synthetic Precipitation Leaching Procedure	£	1312
E.	Metals sample preparation:	Key	-Method
1 .	Dissolved in Water	F	3005A
-2.	Total Recoverable in Water	F	3005A
_3 .	Total Metals	F	3010A, 3120A
-4 .	Oils, Greases, and Waxes	F	3031, 3040A
_5 .	Sediments, Sludges, and Soils	F	3050B
-6.	Microwave Assisted Digestions	£	3015, 3051, 3052
F.	Inorganic chemical:	Key	Method
_1 .	Aluminum	F	6010B, 6020, 7020
-2.	Antimony	F	6010B, 6020, 7040, 7041, 7062
_3 .	Arsenic	F	6010B, 6020, 7060A, 7061A, 7062, 7063
-4.	Barium	F	6010B, 6020, 7080A, 7081
-5.	Beryllium	F	6010B, 6020, 7090, 7091
-6.		F	6010B, 6020, 7130, 7131A
0.	Cadmium	£	0010B, 0020, 7130, 7131A
_7 .	Calcium	F F	6010B, 7140

_9 .	Chromium, Hexavalent	£	7195, 7196A, 7197, 7198, 7199
-10.	Cobalt	F	6010B, 6020, 7200, 7201
-11.	Copper	F	6010B, 6020, 7210, 7211
-12.	Iron	F	6010B, 7380, 7381
-13.	Lead	F	6010B, 6020, 7420, 7421
-14.	Lithium	F	6010B, 7430
-15.	Magnesium	F	6010B, 7450
-16.	Manganese	F	6010B, 6020, 7460, 7461
	-		
-17.	Mercury	₽	7470A, 7471A, 7472
-18.	Molybdenum	F	6010B, 7480, 7481
-19.	Nickel	F	6010B, 6020, 7520, 7521
-20.	Osmium	F	6010B, 7550
-21.	Potassium	F	6010B, 7610
-22.	Selenium	F	6010B, 7740, 7741A, 7742
-23.	Silver	F	6010B, 6020, 7760A, 7761
-24.	Sodium	F	6010B, 7770
-25.	Strontium	F	6010B, 7780
-26.	Thallium	F	6010B, 6020, 7840, 7841
-27.	Tin	F	6010B, 7870
-28.	Vanadium	F	6010B, 7910, 7911
-29.	Zinc	F	6010B, 6020, 7950, 7951
-30.	White Phosphorus	₽	7580
G.	Sample preparation and extraction:	Key	Method
-1 .	Preparation and Extraction	£	3500B
-2.	Funnel Liquid-Liquid Extraction	<u>F</u>	3510C
_3 .	Continuous Liquid-Liquid Extraction	F	3520C
-4 .	Solid Phase Extraction	F	3535
_5 .	Soxhlet Extraction	F	3540C, 3541
-6.	Pressurized Fluid Extraction	F	3545
-7.	Sonication Extraction	F	3550B
-8.	Supercritical Fluid Extraction	F F	3560, 3561
-0.	эирегенисаг гина £хитаснон	r'	3300, 3301
_9 .	Waste Dilution	F	3580A, 3585
-10.	Equilibrium Headspace	F	5021
-11.	Purge and Trap	F	5030B, 5035
-12.	Distillation	F	5031, 5032

-13.	Sorbent Cartridges from Organic Sampling Train	F	5041A
-14.	Cyanide Extraction for Solids and Oils	F	9013
-15.	Bomb Preparation Method for Solid Waste	F	5050
н.	Sample cleanup:	Key	Method
1 .	Cleanup	F	3600C
-2.	Alumina Column	F	3610B
_3 .	Alumina Column - petroleum wastes	F	3611B
<u>-4.</u>	Florisil Column	F	3620B
_5 .	Silica Gel Cleanup	F	3630C
-6.	Gel-Permeation Cleanup	F	3640A
7	Acid-Base Partition	E	2650D
_7 .		-	3650B
-8.	Sulfur Cleanup	F F	3660B 3665A
_9 .	Sulfuric Acid/Permanganate Cleanup	F	3003A
I.	Organic chemical:	Key	Method
-1 .	1,2-Dibromoethane and 1,2-Dibromo-3-Chloropropane	F	8011
_2 .	Nonhalogenated Volatile Organics	F	8015B
_3 .	Volatile Organics	F	8021B, 8260B
-4.	Acrolein/Acrylonitrile/Acetonitrile	F	8316
_5 .	Acrylonitrile	F	8031
-6.	Acrylamide	F	8032A
_7 .	Acetonitrile	F	8033
-8.	Phenols Phenols	F	8041
_9 .	Phthalate Esters	F	8061A
-10.	Nitrosamines	F	8070A, 8330
-11.	Organochlorine Pesticides	F	8081A
-12.	Polychlorinated Biphenyls	F	8082
-13.	Polychlorinated Biphenyls in Waste Oil	F1	600/4-81-045
-14.	Nitroaromatics and Cyclic Ketones	F	8091, 8330
-15.	Polynuclear Aromatic Hydrocarbons	F	8100, 8310
-16.	Haloethers	F	8111
-17.	Chlorinated Hydrocarbons	F	8121
-18.	Organophosphorus Pesticides	F	8141A
-19.	Chlorinated Herbicides	F	8151A
-20.	Semivolatile Organics	F	8270C, 8275A
-21.	Semivolatile Organics	F	8410
-22.	Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans	F	8280A, 8290
-23.	Carbonyl Compounds	F	8315A
-24.	N-Methylcarbamates	F	8318

-25.	Namyalatila Organica	F	9221 4 9225
-23. - 26.	Nonvolatile Organics Tetrazine	F	8321A, 8325 8331
-20. - 27.	Total Petroleum Hydrocarbons in Soil	F	8440
21.	Total Fetroleum Hydrocarbons in Son	F K	418.1AZ
-28.	C _{1.6} C _{3.2} Hydrocarbons	K	8015AZ
-29.	Trinitrotoluene	F	4050
-30.	RDX by Immunoassay	F	<u>-4051</u>
-31.	Aniline and Derivatives	F F	8131 8332
-32. -33.	Nitroglycerine Pig(2 phloropthyl)Ether Hydrolygis Products		8430
 L	Bis(2-chloroethyl)Ether Hydrolysis Products		Method
J.	Organic chemical screening: Headspace	Key F	3810
 .	Purgeables after Hexadecane Extraction	F	3820
-2. -3.	Semivolatile Organics	F	8275A
-3. -4.	Immunoassay	F	4010A, 4015, 4020, 4030, 4035, 4040,
	mmunoassay	r	4041, 4042
_5 .	Polychlorinated Biphenyls	F	9078, 9079
-6.	Trinitrotoluene	F	8515
K.	Miscellaneous:	Key	Method
-1 .	Cyanide	F	9010B, 9012A, 9213
_2 .	Total Organic Halides	F	9020B, 9022
_3 .	Purgeable Organic Halides	F	9021
-4 .	Extractable Organic Halides	F	9023
_5 .	Sulfides	F	9030B, 9031, 9215
-6.	Sulfate	F	9035, 9036, 9038, 9056
_7 .	pH (Hydrogen ion)	F	9040B, 9041A, 9045C
-8.	Specific Conductance	F	9050A
_9 .	Total Organic Carbon	F	9060
-10.	Phenolics	F	9065, 9066, 9067
-11.	Total Recoverable Oil and Grease	F	9070, 9071A
-12.	Nitrate	F	9056, 9210
-13.	Nitrite	F	9056
-14.	Chloride	F	9056, 9057, 9212, 9250, 9251, 9253
-15.	Bromide	F	9056, 9211
-16.	Fluoride	F	9056, 9214
-17.	Total Chlorine in New and Used Petroleum- Products	F	9075, 9076, 9077
-18.	Cation-Exchange Capacity of Soils	F	9080, 9081
-19.	Compatibility Test for Wastes and Membrane Liners	F	9090A
-20.	Paint Filter Liquids Test	F	9095A
-21.	Liquid Release Test Procedure	₽	9096
-22.	Saturated Hydraulic and Leachate	F	9100
	Conductivity and Intrinsic Permeability		
-23.	O-Phosphate-P	F	9056
L.	Asbestos:	Key	Method
-1 .	Fiber Counting	G	7400, 7402

-2.	Bulk Asbestos	G	9002
_		Ħ	Bulk Asbestos
M.	Radiochemical:	Key	Method
4.	Gross Alpha and Beta	F	9310
2 .	Alpha-Emitting Radium Isotopes	F	9315
_3 .	Radium-228	F	9320

R9-14-614. Air Sample Methods and Stack Compliance Testing

A. When conducting compliance testing of an air sample for a listed contaminant or group of contaminants, a laboratory shall use at least one of the corresponding methods listed below, unless the laboratory uses an alternate method approved by the Department for such testing under A.A.C. R9-14-610(B). Where two methods listed are joined by the word "and," a laboratory shall use both methods listed. To locate the source of each method listed, cross reference the capital letter listed under the term "Key" below to the corresponding key-reference list in A.A.C. R9-14-610(A).

A licensee for a laboratory at which air or stack compliance testing is performed shall ensure that each air or stack sample for Arizona compliance testing is analyzed using an approved method:

- 1. <u>Listed under Exhibit I, Table 1, Section D, Air and Stack Parameters; or</u>
- 2. Approved by the Department for air or stack compliance testing under R9-14-610(C).

₽.	Ambient air:	Key	Method
_1 .	Carbon Monoxide	θ	Appendix C
2 .	Hydrocarbons	Đ	Appendix E
3 .	Lead	Đ	Appendix G
-4.	Nitrogen Dioxide	Đ	Appendix F
_5 .	Ozone	Đ	Appendix D, H
-6.	Particulate Matter	Đ	Appendix B, J, K
_7 .	Sulfur Oxides	Đ	Appendix A
-8.	Formaldehyde	F	8520
C.	Stationary and stack sources:	Key	Method
1 .	Carbon Dioxide, Oxygen, and Excess Air	Q	Method 3
2 .	Carbon Monoxide	Ą	Method 10, 10A, 10B
_3 .	Carbonyl Sulfide, Hydrogen Sulfide, and Carbon Disulfide	Ą	Method 15
-4.	Fluoride	Q	Method 13A, 13B, 14
_5.	Fugitive Emissions	Q	Method 22
-6.	Gaseous Organic Compounds	Q	Method 18, 25, 25A, 25B
_7 .	Hydrogen Sulfide	Q	Method 11
-8.	Inorganic Lead	Ą	Method 12
<u>9.</u>	Moisture Content	Q	Method 4
-10.	Nitrogen Oxide	Q	Method 7, 7A, 7B, 7C, 7D, 7E, 1
-11.	Particulate Emissions:		
a.	Asphalt Processing	Q	Method 5A
<u>b.</u>	Fiberglass Insulation	Q	Method 5E
<u>с.</u>	Nonsulfate	Ą	Method 5F
d.	Nonsulfuric Acid	Q	Method 5B
е.	Pressure Filters	Q	Method 5D
<u>f.</u>	Stationary Sources	Q	Method 5, 17
g.	Sulfur Dioxide	Q	Method 19
<u>—h.</u>	Wood Heaters	Q	Method 5G, 5H
-12.	Petroleum Product Analysis:		
a.	Hydrometer Method	I	D287-92

<u>—b.</u>	Sulfur	I	D4294-90
с.	Heat of Combustion	I	D240-92
-13.	Sulfur and Total Reduced Sulfur	Q	Method 15A, 16, 16A, 16B
-14.	Sulfur Dioxide	Q	Method 6, 6A, 6B, 6C, 8, 19, 20
-15.	Sulfuric Acid Mist	Q	Method 8
-16.	Vapor Tightness Gasoline Delivery Tank	Q	Method 27
-17.	Volatile Matter, Density Solids and Water	Q	Method 24, 24A
-18.	Volatile Organic Compounds	Q	Method 21
		\$1	TO-15
_19.	Wood Heaters Certification and Burn Rates	Q	Method 28, 28A
D.	ADEQ emission tests:	Key	Method
_1 .	Particulate Emissions:		
a.	Sulfuric Acid Mist/Sulfur Oxides	R	Method A1
<u>b.</u>	Dry Matter	R	Method A2
E.	National emission standards for hazardous air pollutants:	Key	Method
_1 .	Arsenic	S	Method 108, 108A, 108B, 108C
_2 .	Beryllium	\$	Method 103, 104
-3.	Mercury	\$	Method 101, 101A, 102, 105
-4.	Polonium-210	S	Method 111
-5.	Vinyl Chloride	S	Method 106, 107, 107A

R9-14-615. Quality Assurance

- **A.** A licensee or an applicant shall ensure that the <u>laboratory</u>'s analytical data <u>produced at the licensee</u>'s or <u>applicant</u>'s <u>laboratory</u> are of known and acceptable precision and accuracy, as prescribed by the approved method for each analysis or as prescribed by the limits <u>established</u> <u>described</u> under subsection (C)(89), and are scientifically valid and defensible.
- **B.** A licensee or an applicant shall have, implement, and comply with a written quality assurance plan that contains the following and is available at the laboratory for Department review:
 - 1. A title page identifying the laboratory and date of review and including the laboratory director's signature of approval;
 - 2. A table of contents;
 - 3. A detailed statement of the laboratory organization An organization chart or list of the laboratory personnel, including names, line of authority, and identification of principal quality assurance personnel;
 - 4. A copy of the current laboratory license and a list of licensed parameters;
 - 4.5. A statement of quality assurance objectives, including data quality objectives with precision and accuracy goals and the criteria that the laboratory will use to judge for determining the acceptability of each testing;
 - 5.6. Specifications for:
 - a. Sample containers,
 - b. Preparation of sample containers,
 - c. Preservation of samples, and
 - d. Maximum allowable holding times;
 - 6.7. A procedure for documenting laboratory receipt of samples and tracking of samples throughout during laboratory testing;
 - 7-8. A procedure for analytical instrument calibration, including frequency of calibration and complying with the requirements for calibration in subsection (C);
 - 8. A copy of the laboratory's current license and a list of licensed parameters;
 - 9. Procedure A procedure for compliance testing data reduction and validation and reporting of final results, including the identification and treatment of data outliers, the determination of the completeness and accuracy of data transcription, and all calculations:
 - 10. A statement of the frequency of all quality control checks;
 - 11. A statement of the acceptance criteria for all quality control checks;
 - 12. Preventive maintenance procedures and schedules;
 - 13. Assessment procedures for data acceptability;
 - 14. Corrective action procedures to be taken when results from analytical quality control checks are unacceptable, includ-

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- ing the steps taken to demonstrate the presence of any interference if the precision, accuracy, or practical quantitation limit of quantitation of the reported compliance testing result is affected by the interference; and
- 15. Procedures for chain-of-custody documentation, including procedures for the documentation and reporting of any deviation from the sample handling or preservation requirements listed in this Section.
- **C.** A licensee or an-applicant shall:
 - 1. Have available at the laboratory all methods, equipment, reagents, and glassware necessary for the compliance testing for which the laboratory licensee or applicant is licensed or is requesting a license;
 - 2. Use <u>and document the use of</u> only reagents of a grade equal to or greater than that required by the approved methods in A.A.C. R9-14-611 through A.A.C. R9-14-614;
 - 3. Maintain <u>and require each analyst to comply with a complete and current standard operating procedures procedure</u> for <u>all each licensed methods method, which shall include at least:</u>
 - a. A requirement that the method be performed in compliance with the requirements in the approved method;
 - b. A description of all procedures to be followed when the method is performed;
 - c. A list of the concentrations for calibration standards, check standards, and spikes;
 - d. Requirements for instrumental conditions and set up;
 - e. A requirement for frequency of calibration;
 - Calculations for the quantitation of the final concentration of samples, with the actual sample dilution factors and the calibration algorithm used, which reflect the procedures followed; and
 - g. Requirements for preventative maintenance;
 - 4. Calibrate equipment according to the manufacturer's specifications and each instrument as required by the each approved method for which the equipment is used, as follows:
 - a. If a calibration model is specified in the method, using the specified calibration model or, if another calibration model has been approved by the Department as a method alteration, using the calibration model approved as a method alteration;
 - b. If multiple calibration models are included as options in the method, using one of the included calibration models or, if another calibration model has been approved by the Department as a method alteration, using the calibration model approved as a method alteration; or
 - c. If the method does not include a calibration model, using the manufacturer's specifications for calibration;
 - 5. Maintain calibration documentation available for onsite review, including documentation that demonstrates the calculations performed using each calibration model;
 - 6. Develop, document, and maintain <u>a</u> current <u>method-limit of</u> detection <u>limits</u> and <u>method reporting limits limit of</u> <u>quantitation</u> for each compliance parameter for each instrument;
 - 7. Develop each limit of detection using:
 - a. The protocol in the applicable test method;
 - b. The protocol in the applicable federal regulation; or
 - c. A process that complies with the guidelines in Section D.1.2 of Chapter 5, Appendix D—Essential Quality Control Requirements, in National Environmental Laboratory Accreditation Conference, EPA Pub. No. EPA/600/R-04/003, 2003 NELAC Standard (June 5, 2003), including no future editions or amendments, which is incorporated by reference, on file with the Department, and available from the National Environmental Laboratory Accreditation Conference, US EPA ORD/NERL, Mailcode E243-05, RTP, NC 27711, or at www.epa.gov/nelac;
 - 7.8. Maintain all compliance testing equipment in proper operating condition;
 - 8.9. Statistically develop limits from historical data, if the laboratory tests for a For each parameter tested at the laboratory for which quality control acceptance criteria are not specified in the approved method or by EPA or ADEQ.
 - <u>a.</u> <u>Use default limits provide</u>d in Exhibit II; or
 - <u>b.</u> <u>Statistically develop limits from historical data</u> by:
 - a-i. Determining the mean and standard deviation for a minimum of 20 data points not invalidated for cause, excluding statistical outliers; and
 - b-ii. Setting the limits no more than three standard deviations from the mean and in the detectable range, using as the lower end of the detectable range the limit of quantitation or the lowest standard value represented in the initial calibration; and
 - iii. Explaining the origin of the lower end of the detectable range in the laboratory's standard operating procedure; and
 - 9.10. Discard or segregate all expired standards or reagents from all compliance testing;
 - 11. Maintain a record showing the traceability of reagents; and
 - 12. Ensure that a calibration model is not used or changed to avoid necessary instrument maintenance.
- **D.** A licensee or an applicant may submit a written request to the Department for an exemption from subsection (C)(1) for a specific parameter if the licensee or applicant:
 - 1. Documents that the laboratory has performed the approved method <u>has been performed at the laboratory</u> and that the analytical data generated were scientifically valid and defensible and of known and acceptable precision and accu-

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- racy;; and
- 2. Documents the laboratory's licensee's or applicant's ability to obtain the equipment, reagent, or glassware necessary to perform the approved method.
- **E.** The written request for an exemption under subsection (D) shall include:
 - 1. The name, address, and main telephone number of the laboratory;
 - 2. The name, address, and telephone number of the licensee or applicant submitting the request;
 - 3. Identification of the method parameter and the equipment, reagent, or glassware for which the licensee or applicant is requesting an exemption; and
 - 4. The documentation described in subsections (D)(1) and (2).
- **F.** The Department may approve a request for an exemption under subsection (D) if it determines:
 - 1. That the laboratory has performed the approved method has been performed at the laboratory;
 - 2. That the analytical data generated were scientifically valid and defensible and of known and acceptable precision and accuracy; and
 - 3. That the laboratory licensee or applicant is able to obtain the equipment, reagent, or glassware necessary to perform the approved method.
- G. A licensee or applicant shall ensure that a laboratory's written quality assurance plan is a separate document available at the laboratory and includes all of the components required in subsection (B), but a licensee or applicant may satisfy the components required in subsections (B)(3) through (15) through incorporating by reference provisions in separate documents such as standard operating procedures.
- **H.** A licensee or applicant shall ensure that each laboratory standard operating procedure is a separate document available at the laboratory and includes all of the components required in subsection (C)(3), but a licensee or applicant may satisfy the components required in subsections (C)(3)(f) and (g) through incorporating by reference provisions in separate documents such as other standard operating procedures.

R9-14-616. Operation

- A. A compliance sample accepted by a laboratory may be analyzed by the accepting laboratory or another laboratory licensed under this Article or exempted under A.R.S. § 36-495.02(A) or A.A.C. R9-14-602. A proficiency evaluation audit sample shall be analyzed by the accepting laboratory only. A licensee shall ensure that:
 - 1. A compliance testing sample accepted at the licensee's laboratory is analyzed:
 - a. At the licensee's laboratory,
 - b. At another laboratory licensed under this Article, or
 - c. At a laboratory exempted under A.R.S. § 36-495.02(A) or R9-14-602;
- **B.** If the laboratory performing analysis is not the accepting laboratory, all reports required by A.A.C. R9-14-617 shall include the name and address of the accepting laboratory and the name and address of the laboratory analyzing the compliance sample.
- C. Each licensed laboratory shall:
 - 4.2. Maintain the The facility and utilities required to operate equipment and perform compliance testing are maintained;
 - 2.3. Provide environmental Environmental controls are maintained within the laboratory to ensure that laboratory environmental conditions do not affect analytical results beyond quality control limits established for the approved methods listed in A.A.C. R9-14-611 through A.A.C. R9-14-614 performed at the laboratory;
 - 3.4. Provide for storage Storage, handling, and disposal of hazardous materials at the laboratory are in accordance with all state and federal regulations; and
 - 4.5. Maintain the <u>The</u> following information <u>is maintained for all relating to</u> supervisory, quality assurance, and analytical personnel:
 - a. A summary of each individual's education and professional experience;
 - b. Documentation of each individual's review of the laboratory quality assurance plan required under R9-14-615(B) and the approved methods and laboratory standard operating procedures within the for each area or areas of testing performed by the individual or for which the individual has supervisory or quality assurance responsibility or performs testing;
 - Documentation of each analyst's completion of training on the use of equipment and of proper laboratory technique, including the <u>name of the analyst</u>, the name of the instructor, the duration of the training, and the date of completion of the training;
 - d. Documentation of each analyst's completion of all training classes, continuing education courses, seminars, and conferences that relate to the testing procedures used by the analyst for compliance testing:
 - e. Documentation of each analyst's completion of Initial Demonstration of Capability as required by the each approved methods method performed by the analyst, as applicable;
 - f. Documentation of each analyst's performance of proficiency evaluation testing, as applicable; and
 - g. Documentation of each analyst's completion of training related to instrument calibration that includes:
 - i. Instruction on each calibration model that the analyst will use or for which the analyst will review data;
 - ii. For each calibration model described in subsection (5)(g)(i), the specific aspects of the calibration model

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- that might compromise the data quality, such as detector saturation, lack of detector sensitivity, the calibration model's not accurately reflecting the calibration points, inappropriate extension of the calibration range, weighting factors, and dropping of mid-level calibration points without justification; and
- iii. Instruction that a calibration model shall not be used or changed to avoid necessary instrument maintenance; and
- g.h. Documentation of each individual's applicable certifications and specialized training -: and
- **D.**6. A The licensee shall comply complies with all applicable federal, state, and local occupational safety and health regulations.

R9-14-617. Laboratory Records and Reports

- A. A licensee or applicant shall ensure that:
 - 1. Each Records and reports record and report required to be maintained by this Article shall be is available for inspection and copying by the Department during normal business hours by representatives of the Department:
 - 2. Representatives of the The Department may is permitted to remove copied records and reports from a laboratory.
- **B.**3. A The licensee shall maintain or applicant maintains records and reports of compliance testing and the ability to reproduce all electronic data for at least five years from after the date of compliance testing. A licensee shall maintain, with:
 - <u>a.</u> <u>All</u> records and reports for <u>at least</u> the most current two years <u>maintained</u> onsite at the laboratory and may store the remaining records and reports <u>stored</u> in a secure storage facility.
 - b. Each hard copy document containing data either maintained as a hard copy document or scanned into a PDF file or another electronic file format that preserves an exact copy of the hard copy data; and
 - c. All instrument-generated electronic data maintained in a reproducible format from which reports can be produced and printed;
- 4. No portion of a record or report of compliance testing is altered or deleted to hide or misrepresent any part of the data; C-5. A-The licensee shall produce or applicant produces all records and reports requested by the Department within 24 hours of after the request. The Department may extend the 24-hour time period-or, if the licensee or applicant requires requests a period longer than 24 hours, a longer period of time agreed upon by the Department.
- **D.**6. If data from Arizona compliance samples are not available for inspection and copying, the <u>Upon Department request</u>, the licensee shall make or applicant makes available for inspection and copying any current the requested data from out-of-state non-Arizona compliance samples when such data are requested by Department representatives.;
- **E.**7. A compliance testing record shall contain contains:
 - 1.a. Sample information, including the following:
 - a.i. A unique sample identification assigned by at the laboratory,
 - b.ii. The location or location code of sample collection,
 - e.iii. The sample collection date and time,
 - div. The type of testing to be performed, and
 - e.v. The name of the individual who collected the sample;
 - 2.b. The name and address of the client submitting the sample to the laboratory;
 - 3.c. The name of the individual who submitted the sample to the laboratory;
 - 4.d. The date and time of the laboratory's receipt of the sample at the laboratory;
 - 5.e. The name of the individual who received the sample into at the laboratory;
 - 6.f. The dates and times of testing, including the date and time of each critical step;
 - 7-g. The actual results of compliance testing, including all raw data, work sheets, and calculations performed;
 - 8-h. The actual results of quality control data validating the test results, including the calibration and calculations performed;
 - 9.i. The name of the each analyst or analysts who performed the testing; and
 - 10.j.A copy of the final report.:
- **E.**8. A final report of compliance testing shall contains:
 - 1.a. The name, address, and telephone number of the laboratory;
 - 2.b. The license number assigned to the laboratory by the Department;
 - 3.c. Actual scientifically valid and defensible results of compliance testing in appropriate units of measure, obtained in accordance with the <u>an</u> approved method and the laboratory quality assurance plan, as described in A.A.C. R9-14-615.
 - 4.d. Results Qualified results of compliance testing not obtained in accordance with the an approved method and the laboratory quality assurance plan:
 - 5.e. A list of the each approved methods method used to obtain the reported results;
 - 6.f. Sample information, including the following:
 - a.i. The unique sample identification assigned by at the laboratory,
 - b.ii. The location or location code of sample collection,
 - e.iii. The sample collection date and time,
 - div. The name of the individual who collected the sample,

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- e.v. The name of the client that submitted the sample to the laboratory, and
- £vi. The name of the individual who submitted the sample to the laboratory;
- 7.g. The date of analysis for each parameter reported;
- 8.h. The date of the final report; and
- 9.i. The laboratory director's or designee's signature.

R9-14-618. Mobile Laboratories

- **A.** An applicant shall obtain a license for each mobile laboratory, unless the applicant chooses the single license option for multiple laboratories as described in A.A.C. R9-14-603(E) R9-14-603(D).
- **B.** A <u>licensee or applicant for a mobile laboratory shall ensure that the mobile laboratory is operated in compliance with meet all of the requirements of this Article.</u>
- **B.C.**Upon Department request, the <u>a</u> licensee of <u>or applicant for</u> a mobile laboratory shall provide to the Department the mobile laboratory's location and a list of the parameters <u>it is for which</u> testing <u>is performed at the mobile laboratory</u>.

R9-14-619. Out-of-State Environmental Laboratory Licensing

- A. An A licensee or applicant for an out-of-state laboratory applying for or possessing an initial license or a renewal license at which Arizona compliance testing is performed shall comply with the requirements of A.R.S. Title 36, Chapter 4.3 and this Article
- **B.** The $\underline{\Lambda}$ licensee or applicant for an out-of-state laboratory shall pay all actual expenses incurred by the Department as a result of the laboratory's location in another state, including:
 - 1. The estimated costs of each laboratory inspection or investigation at the laboratory;
 - The amount by which the actual costs of each laboratory inspection or investigation at a laboratory exceed the estimated costs:
 - 3. Additional expenses incurred by the Department for each investigation at the laboratory; and
 - 4. A zone fee for each Department representative required to appear at the laboratory to perform the laboratory inspection or investigation, as follows:
 - a. For zone 1, including California, Nevada, Utah, Colorado, and New Mexico: \$88.00114;
 - b. For zone 2, including all states west of the Mississippi River not listed in subsection (B)(4)(a): \$139.00179;
 - c. For zone 3, including all states east of the Mississippi River and Alaska and Hawaii: \$225.00290-; and
 - <u>d.</u> For zone 4, including all countries outside of the United States: \$516.

C. The Department shall:

- 1. determines Determine the estimated costs and zone fees for a laboratory inspection or investigation after making travel arrangements to visit the an out-of-state laboratory.
- 2. The Department then sends Send the licensee or applicant for an out-of-state laboratory a bill for the estimated costs and zone fees to the licensee or applicant for the out-of-state laboratory. The licensee or applicant for the out-of-state laboratory shall, with instructions to submit the amount billed to the Department the amount of the estimated costs and zone fees within 20 days from after the date that the Department sent sends the bill; and
- **D.**3. After a laboratory inspection or investigation is completed, the Department determines determine the actual costs for the laboratory inspection or investigation and any additional expenses incurred for an investigation at a laboratory. and:
 - 1.a. If the actual costs and additional expenses exceed the estimated costs and zone fees <u>already</u> paid <u>as described in subsection (C)</u>, the <u>Department sends send</u> a bill to the licensee or applicant for the out-of-state laboratory for the amount by which the actual costs and expenses exceed the estimated costs and zone fees paid. The licensee or applicant for the out-of-state laboratory shall, with instructions to submit the amount billed to the Department the amount by which the actual costs and expenses exceed the estimated costs and zone fees paid within 20 days from after the date that the Department sent sents the bill: or
 - 2.b. If the actual costs and expenses are less than the estimated costs and zone fees <u>already</u> paid as <u>described in subsection</u> (C), the <u>Department shall notify the licensee or applicant</u>, determine whether the licensee or applicant desires a refund or a credit, and send a refund or issue a credit to the licensee or applicant for the out of state laboratory for the amount by which the estimated costs and zone fees paid exceed the actual costs and expenses. Upon determining that the estimated costs and zone fees paid exceed the actual costs and expenses, the Department shall notify the licensee or applicant and ask whether the licensee or applicant desires a refund or a credit. The Department shall send the refund or issue the credit for the amount by which the estimated costs and zone fees paid exceed the actual costs and expenses within 45 days from after the date that the licensee or applicant specifies the desired form of payment.

R9-14-620. Changes to a License

- **A.** During the term of a license, a licensee may request to have one or more parameters added to the license.
- **B.** To request to have one or more parameters added to a license, a licensee shall submit to the Department:
 - 1. A written request that includes:
 - a. The name, address, and telephone number of the licensee submitting the request;
 - b. The name, address, and telephone number of the laboratory for which the addition is requested; and

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- c. <u>Identification of each parameter requested to be added;</u>
- 2. The applicable method and instrumentation fees, as determined according to Tables 1 and 2 in Exhibit I, payable to the Arizona Department of Health Services by credit card; certified check; business check; or money order; or, if the owner is an Arizona state agency, purchase order;
- 3. If the addition results in a different Level of license, the difference between the application fee paid with the most recent application and the application fee for the new Level of license required under R9-14-607(A)(2), payable to the Arizona Department of Health Services as provided in subsection (B)(2); and
- 4. The following for each parameter requested to be added:
 - a. The limit of detection, if applicable;
 - b. A copy of a proficiency testing report; and
 - c. A copy of the standard operating procedure.
- C. The Department may conduct a laboratory inspection during the substantive review period for a request to have one or more parameters added to a license.
- **D.** The Department shall process a request to have one or more parameters added to a license as provided in R9-14-621.
- E. A licensee may request deletion of parameters at no charge three times during a license period, but shall pay \$17 per parameter for the fourth and each subsequent deletion requested during a license period.

R9-14-620R9-14-621. Time-frames

- **A.** The overall time-frame described in A.R.S. § 41-1072 for each type of approval granted by the Department under this Article is set forth in Table 1.
 - <u>1.</u> The licensee or <u>An</u> applicant and the Department may agree in writing to extend the substantive review time-frame and the overall time-frame.
 - 2. An extension of the substantive review time-frame and the overall time-frame may not exceed 25% of the overall time-frame.
- **B.** The administrative completeness review time-frame described in A.R.S. § 41-1072 for each type of approval granted by the Department under this Article is set forth in Table 1 and begins on the date that the Department receives an application or request for approval.
 - 1. The Department shall <u>mail send</u> a notice of administrative completeness or deficiencies to <u>the licensee or an</u> applicant within the administrative completeness review time-frame.
 - a. A notice of deficiencies shall list each deficiency and the <u>information or</u> items needed to complete the application or request for approval.
 - b. The administrative completeness review time-frame and the overall time-frame are suspended from the date that the <u>a</u> notice of deficiencies is <u>issued sent</u> until the date that the Department receives <u>all of</u> the missing <u>information</u> or items from the licensee or an applicant.
 - 2. e.If the licensee or an applicant fails to submit to the Department all of the information and items listed in the a notice of deficiencies within 180 60 days from after the date that the Department mailed sent the notice of deficiencies, the Department shall consider the application or request for approval withdrawn and deny the license or other approval requested.
 - 2.3. If the Department issues a license or other approval to the licensee or an applicant during the administrative completeness review time-frame, the Department shall not issue a separate written notice of administrative completeness.
- C. The substantive review time-frame described in A.R.S. § 41-1072 is set forth in Table 1 and begins on the date of the a notice of administrative completeness.
 - 1. As part of the substantive review for an initial license application, the Department shall may conduct a laboratory inspection and may conduct an investigation or a proficiency evaluation audit testing, or both a combination of the three, as described in R9-14-605.
 - a. The Department shall commence the <u>a</u> laboratory inspection, investigation, or proficiency evaluation audit testing, or combination of the <u>3three</u>, no more than 30 days after notice of administrative completeness has been mailed for an in-state laboratory or no more than 60 days after notice of administrative completeness has been mailed for an out-of-state laboratory.
 - b. The Department and <u>an</u> applicant may mutually agree in writing to <u>extend the schedule a laboratory inspection</u>, proficiency <u>evaluation audit testing</u>, or investigation <u>dates later than the date required under subsection (C)(1)(a)</u>.
 - 2. The Department shall <u>mail send</u> written notification of approval or denial of <u>the a license</u> application or other <u>request</u> for approval to <u>the licensee or an</u> applicant within the substantive review time-frame.
 - 3. During the substantive review time-frame, the Department may make one comprehensive written request for additional information, unless the Department and the licensee or applicant have agreed in writing to allow the Department to submit supplemental requests for information.
 - 4. If the Department issues a comprehensive written request or a supplemental request for information, the substantive review time-frame and the overall time-frame shall be are suspended from the date that the Department issues the request until the date that the Department receives all of the information requested.
 - 5. If an applicant fails to submit to the Department all of the information and items listed in a comprehensive written

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request or a supplemental request for information within 60 days after the date that the Department sent the comprehensive written request or supplemental request for information, the Department shall deny the license or other approval requested.

- 5.6. The Department shall issue an grant a license or other approval unless:
 - a. An applicant fails to submit requested information or a requested item as described in subsection (B)(2) or (C)(5);
 - <u>a-b.</u> For an initial license application or a regular license renewal application where the regular license is not suspended, the Department determines that grounds to deny the license exist under A.R.S. § 36-495.09;
 - b.c. For a regular license renewal application where the regular license is suspended, the Department determines that the licensee is not in full compliance with the corrective action plan; A.R.S. Title 36, Chapter 4.3; and or this Article:
 - e.d. For a request for approval of a new an alternate method or method alteration, the Department determines that use of the alternate method or method alteration is not required or authorized by an EPA or ADEQ statute or rule or is not justified as described in A.A.C. R9-14-610(B)(2)(d) does not meet the standard for approval under R9-14-610(C)(4); or
 - d.e. For a request for approval of an exemption under A.A.C. R9-18-615(D)R9-14-615(D), the Department determines that the laboratory has not performed the approved method; that the analytical data generated were not scientifically valid and defensible and of known and acceptable precision and accuracy; or that the laboratory is not able to obtain the equipment, reagent, or glassware necessary to perform the method request does not meet the standard for approval under R9-14-615(F).
- 6. If the Department disapproves an application or request for denies a license or other approval, the Department shall send to the applicant a written notice of disapproval denial setting forth the reasons for disapproval denial and all other information required by A.R.S. § 41-1076.

Table 1. Time-frames (in days)

Type of Approval	Statutory Authority	Overall Time-frame	Administrative Completeness Review Time-frame	Substantive Review Time-frame
Initial License–In-State Laboratory	A.R.S. §§ 36-495.01, 36-495.03, 36-495.06, 36-495.07	201	21	180
Initial License–Out-of- State Laboratory	A.R.S. §§ 36-495.01, 36-495.03, 36-495.06, 36-495.07	231	21	210
Regular License Renewal– In-State Laboratory	A.R.S. §§ 36-495.01, 36-495.03, 36-495.06, 36-495.07	37	14	23
Regular License Renewal– Out-of-State Laboratory	A.R.S. §§ 36-495.01, 36-495.03, 36-495.06, 36-495.07, 36-495.14	67	14	53
Regular License Renewal– In-State Laboratory with Provisional License	A.R.S. §§ 36-495.01, 36-495.03, 36-495.05, 36-495.06, 36-495.07	70	21	49
Regular License Renewal– Out-of-State Laboratory with Provisional License	A.R.S. §§ 36-495.01, 36-495.03, 36-495.05, 36-495.06, 36-495.07, 36-495.14	100	21	79
Request for Approval of an Alternate Method or Method Alteration— Required or Authorized by EPA/ADEQ	A.R.S. § 36-495.01 <u>.</u> 36-495.06	105	15	90

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Request for Approval of an Alternate Method or Method Alteration–Not Required or Authorized by EPA/ADEQ	A.R.S. § 36-495.01 <u>.</u> 36-495.06	210	30	180
Request for Approval of an Exemption under A.A.C. R9-14-615(D)	A.R.S. § 36-495.01	60	15	45
Request to Have One or More Parameters Added to a License under R9-14- 620-In-State Laboratory	A.R.S. §§ 36-495.01, 36-495.03, 36-495.06, 36-495.07	91	21	70
Request to Have One or More Parameters Added to a License under R9-14- 620-Out-of-State Laboratory	A.R.S. §§ 36-495.01, 36-495.03, 36-495.06, 36-495.07	121	21	100

EXHIBIT I. APPROVED METHODS; METHOD FEES; INSTRUMENTATION FEES

<u>Table 1.</u> <u>Approved Methods; Method Fees</u>

SECTION A.	SECTION A. DRINKING WATER PARAMETERS					
1. Microbiology of Drinking Water						
Description Reference Method/s Fee Per Method						
Aeromonas	<u>Z1</u>	<u>1605</u>	\$228			
Coliforms, Fecal	<u>C2</u>	<u>9221E</u>	\$228			
		<u>9222D</u>	\$228			
	<u>C1</u>	Hach 8001	\$228			
Coliforms, Total, by Colilert (ONPG-MUG)	<u>C2</u>	<u>9223B</u>	<u>\$152</u>			
Coliforms, Total, by Colisure	<u>C2</u>	<u>9223B</u>	<u>\$152</u>			
Coliforms, Total, by Membrane Filtration	<u>C2</u>	<u>9222B</u>	\$228			
		9222C	\$228			
Coliforms, Total and <i>E. coli</i> , by Membrane Filtration	<u>Z8</u>	1604	\$228			
Coliforms, Total, by Multiple Tube Fermenta-	<u>C2</u>	9221B and C	\$228			
tion	<u>C1</u>	Hach 8001	\$228			
Coliforms, Total, by Presence/Absence	<u>C2</u>	9221D	\$228			
Escherichia coli	X	<u>Tube Procedure</u>	\$228			
		Membrane Filter Procedure	\$228			
Cryptosporidium	<u>P4</u>	<u>1622</u>	\$381			
Giardia and Cryptosporidium	<u>P5</u>	<u>1623</u>	<u>\$381</u>			

Heterotrophic Plate Count	<u>C2</u>	<u>9215B</u>	<u>\$152</u>
	<u>Z4</u>	SimPlate	<u>\$152</u>
Microscopic Particulate Analysis	<u>P1</u>	910/9-92-029	\$228
Viruses	<u>P2</u>	600/R-95/178	\$381
2. Inorganic Chemistry and Physical Pr	roperties of Drinking	Water	'
Description	Reference	Method/s	Fee Per Method
Alkalinity	<u>C2</u>	<u>2320B</u>	<u>\$19</u>
Asbestos	<u>H1</u>	100.1	\$503
	<u>H2</u>	100.2	\$503
Bromate	<u>A6</u>	317.0	<u>\$76</u>
	<u>A7</u>	326.0	<u>\$76</u>
	Z	300.1	\$26
		321.8	\$152
Bromide	<u>A2</u>	300.0	\$26
	<u>A6</u>	317.0	<u>\$76</u>
	<u>A7</u>	326.0	<u>\$76</u>
	Z	300.1	\$26
Calcium	<u>A1</u>	200.7	\$10
	<u>C</u>	<u>3111B</u>	<u>\$26</u>
		<u>3500-Ca D</u>	<u>\$76</u>
Carbon, Dissolved Organic	<u>A9</u>	<u>415.3</u>	<u>\$76</u>
	<u>C2</u>	<u>5310B</u>	<u>\$39</u>
		<u>5310C</u>	<u>\$39</u>
		<u>5310D</u>	\$39
Carbon, Total Organic	<u>A9</u>	<u>415.3</u>	<u>\$76</u>
	<u>C2</u>	<u>5310B</u>	<u>\$39</u>
		<u>5310C</u>	<u>\$39</u>
		<u>5310D</u>	<u>\$39</u>
Chloride	<u>A2</u>	300.0	<u>\$26</u>
	<u>C2</u>	4500-Cl B	\$39
		4500-Cl D	<u>\$39</u>
		<u>4110B</u>	<u>\$26</u>
Chloramine	<u>C2</u>	4500-C1 D	\$39
		4500-C1 F	\$39
		4500-Cl G	<u>\$76</u>

ASOU-CLE \$39	Chlorine	<u>C2</u>	4500-C1 D	\$39
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$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			Hach 8370	<u>\$39</u>
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			Hach 8021	<u>\$39</u>
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Chlorine Dioxide	<u>A8</u>	<u>327.0</u>	<u>\$76</u>
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		<u>C2</u>	4500-ClO ₂ _C	<u>\$39</u>
Chlorite 4500-ClO₂E \$39 Chlorite A2 300.0 \$26 A6 317.0 \$76 A7 326.0 \$76 A8 327.0 \$76 Z 300.1 \$26 Color C2 2120B \$32 Corrosivity C2 2330B \$39 Cyanide A2 335.4 \$76 Cyanide A2 335.4 \$76 4500-CN B \$7 \$76 4500-CN C \$13 \$13 4500-CN E \$76 \$76 4500-CN F \$76 \$76 Cyanide, Amenable C2 4500-CN G \$76 Fluoride A2 300.0 \$26 A3 380-75WE \$39 Cyanide, Amenable C2 4500-F B \$39 Cyanide, Amenable C2 4500-F B \$39 Cyanide, Amenable C3 380-75WE \$39 Cyanide, Amenable C3 350-F B \$39 Cyanide, Amenable C3				<u>\$76</u>
Chlorite A2 300.0 \$26 A6 317.0 \$76 A7 326.0 \$76 A8 327.0 \$76 Z 300.1 \$26 Color C2 2120B \$32 Corrosivity C2 2330B \$39 Cyanide A2 335.4 \$76 C2 2300-CN B \$7 4500-CN B \$7 \$76 4500-CN E \$76 \$13 4500-CN F \$76 \$76 Cyanide, Amenable C2 4500-CN G \$76 Fluoride Δ2 300.0 \$26 A3 380-75WE \$39 Fluoride Δ2 300.0 F B \$39 4500-F C \$26 \$26 4500-F D \$32 4500-F D \$32 4500-F E \$32 4				<u>\$39</u>
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Chlorite	<u>A2</u>		<u>\$26</u>
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		<u>A6</u>	317.0	<u>\$76</u>
		<u>A7</u>	<u>326.0</u>	<u>\$76</u>
		<u>A8</u>	<u>327.0</u>	<u>\$76</u>
Corrosivity C2 2330B \$39 Cyanide A2 335.4 \$76 C2 4500-CN B \$7 4500-CN C \$13 4500-CN E \$76 4500-CN F \$76 Z9 QuikChem 10-204-00-1-X \$76 Cyanide, Amenable C2 4500-CN G \$76 Fluoride A2 300.0 \$26 A3 380-75WE \$39 C2 4500-F B \$39 4500-F C \$26 4500-F D \$39 4500-F E \$39 4500-F E \$39 4110B \$26		<u>Z</u>	300.1	<u>\$26</u>
Cyanide A2 335.4 \$76 Cyanide 4500-CN B \$7 4500-CN C \$13 4500-CN E \$76 4500-CN F \$76 Z9 QuikChem 10-204-00-1-X \$76 Cyanide, Amenable C2 4500-CN G \$76 Fluoride A2 300.0 \$26 A3 380-75WE \$39 C2 4500-F B \$39 4500-F C \$26 4500-F D \$39 4500-F E \$39 4500-F E \$39 4110B \$26	Color	<u>C2</u>	<u>2120B</u>	<u>\$32</u>
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Corrosivity	<u>C2</u>	<u>2330B</u>	<u>\$39</u>
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Cyanide	<u>A2</u>	335.4	<u>\$76</u>
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		<u>C2</u>	4500-CN B	<u>\$7</u>
4500-CN F \$76 Z9 QuikChem 10-204-00-1-X \$76 Cyanide, Amenable C2 4500-CN G \$76 Fluoride A2 300.0 \$26 A3 380-75WE \$39 C2 4500-F B \$39 4500-F C \$26 4500-F D \$39 4500-F E \$39 4110B \$26			4500-CN C	<u>\$13</u>
Z9 QuikChem 10-204-00-1-X \$76 Cyanide, Amenable C2 4500-CN G \$76 Fluoride A2 300.0 \$26 A3 380-75WE \$39 C2 4500-F B \$39 4500-F C \$26 4500-F D \$39 4500-F E \$39 4110B \$26			4500-CN E	<u>\$76</u>
Cyanide, Amenable C2 4500-CN G \$76 Fluoride A2 300.0 \$26 A3 380-75WE \$39 C2 4500-F B \$39 4500-F C \$26 4500-F D \$39 4500-F E \$39 4110B \$26			4500-CN F	<u>\$76</u>
Fluoride A2 300.0 \$26 A3 380-75WE \$39 C2 4500-F B \$39 4500-F C \$26 4500-F D \$39 4500-F E \$39 4110B \$26		<u>Z9</u>	QuikChem 10-204-00-1-X	<u>\$76</u>
A3 380-75WE \$39 C2 4500-F B \$39 4500-F C \$26 4500-F D \$39 4500-F E \$39 4110B \$26	Cyanide, Amenable	<u>C2</u>	4500-CN G	<u>\$76</u>
C2 4500-F B \$39 4500-F C \$26 4500-F D \$39 4500-F E \$39 4110B \$26	Fluoride	<u>A2</u>	300.0	<u>\$26</u>
4500-F C \$26 4500-F D \$39 4500-F E \$39 4110B \$26		<u>A3</u>	380-75WE	<u>\$39</u>
4500-F D \$39 4500-F E \$39 4110B \$26		<u>C2</u>	4500-F B	<u>\$39</u>
4500-F E \$39 4110B \$26			4500-F C	<u>\$26</u>
4110B \$26			4500-F D	<u>\$39</u>
			4500-F E	<u>\$39</u>
<u>C1</u> <u>Hach 8029</u> <u>\$39</u>			4110B	<u>\$26</u>
		<u>C1</u>	Hach 8029	\$39

<u>Hardness</u>	<u>A1</u>	200.7, Sum of Ca and Mg as their carbonates	\$10
	<u>C2</u>	2340 B, Sum of Ca and Mg as their carbonates	\$10
		2340 C	\$39
Magnesium	<u>A1</u>	200.7	\$10
	<u>C</u>	<u>3111B</u>	<u>\$26</u>
Methylene Blue Active Substances	<u>C2</u>	<u>5540 C</u>	\$39
Nitrate	<u>A2</u>	353.2	<u>\$76</u>
		300.0	<u>\$26</u>
	<u>C2</u>	4500-NO ₃ D	\$39
		4500-NO ₃ E	<u>\$76</u>
		4500-NO ₃ F	<u>\$76</u>
		4110B	<u>\$26</u>
Nitrite	<u>A2</u>	<u>353.2</u>	<u>\$76</u>
		300.0	\$26
	<u>C2</u>	4500-NO ₂ _B	<u>\$76</u>
		4500-NO ₃ E	<u>\$76</u>
		4500-NO ₃ F	<u>\$76</u>
		<u>4110B</u>	<u>\$26</u>
Odor	<u>C2</u>	<u>2150B</u>	\$32
Orthophosphate	<u>A2</u>	<u>365.1</u>	<u>\$76</u>
		300.0	<u>\$26</u>
	<u>C2</u>	4500-P E	<u>\$76</u>
		4500-P F	<u>\$76</u>
		<u>4110B</u>	<u>\$26</u>
Ozone	<u>C</u>	4500-O ₃ B	<u>\$39</u>
<u>Perchlorate</u>	<u>Z</u>	314.0	<u>\$76</u>
		<u>314.1</u>	<u>\$76</u>
		<u>331</u>	<u>\$152</u>
		<u>332</u>	<u>\$152</u>
pH (Hydrogen Ion)	<u>A</u>	<u>150.1</u>	\$39
		<u>150.2</u>	<u>\$39</u>
	<u>C2</u>	4500-H B	\$39
	<u>C1</u>	Hach 8156	<u>\$39</u>
Residue, Filterable (TDS)	<u>C2</u>	2540 C	<u>\$39</u>
Sediment Concentration	<u>Z6</u>	D 3977-979	<u>\$13</u>
	1	Ĺ	1

Silica	<u>A1</u>	200.7	<u>\$10</u>
	<u>C2</u>	4500-Si C	<u>\$76</u>
		4500-Si D	<u>\$76</u>
		4500-Si E	<u>\$76</u>
Sodium	<u>A1</u>	200.7	<u>\$10</u>
	<u>C</u>	<u>3111B</u>	<u>\$26</u>
Specific Conductance	<u>C2</u>	<u>2510B</u>	\$39
	<u>C1</u>	<u>Hach 8160</u>	\$39
Sulfate	<u>A2</u>	300.0	\$26
		<u>375.2</u>	<u>\$76</u>
	<u>C2</u>	4500-SO ₄ C	<u>\$76</u>
		4500-SO ₄ D	<u>\$76</u>
		4500-SO ₄ E	<u>\$76</u>
		4500-SO ₄ F	<u>\$76</u>
		4110B	\$26
Temperature, Degrees Celsius	<u>C2</u>	<u>2550</u>	<u>\$13</u>
Turbidity, Nephelometric (NTU)	<u>A2</u>	180.1	\$39
	<u>C2</u>	<u>2130B</u>	\$39
UV-Absorbing Organic Constituents	<u>C2</u>	<u>5910B</u>	<u>\$76</u>
3. Metals in Drinking Water			
a. Sample Preparation for Metals in Drinl	king Water		
Description	Reference	Method/s	Fee Per Method
Acid Extractable Metals	<u>C</u>	3030C	<u>\$7</u>
Microwave Assisted Digestion	<u>C</u>	<u>3030K</u>	<u>\$7</u>
Nitric Acid	<u>C</u>	3030E	<u>\$7</u>
Nitric Acid/Hydrochloric Acid	<u>C</u>	<u>3030F</u>	<u>\$7</u>
Nitric Acid/Perchloric Acid	<u>C</u>	<u>3030H</u>	<u>\$7</u>
Nitric Acid/Perchloric Acid/Hydrofluoric Acid	<u>C</u>	<u>3030I</u>	<u>\$7</u>
Nitric Acid/Sulfuric Acid	<u>C</u>	<u>3030G</u>	<u>\$7</u>
Preliminary Filtration	<u>C</u>	<u>3030B</u>	<u>\$7</u>
b. Methods to Analyze Metals in Drinking	Water		
Description	Reference	Method/s	Fee Per Method
		•	

Aluminum	<u>A1</u>	200.7	<u>\$10</u>
		200.8	\$26
		200.9	\$26
	<u>C</u>	<u>3111D</u>	\$26
		<u>3113B</u>	\$26
Antimony	<u>A1</u>	200.8	\$26
		200.9	\$26
	<u>C</u>	<u>3113B</u>	\$26
Arsenic	<u>A1</u>	200.8	\$26
		200.9	\$26
	<u>C</u>	<u>3113B</u>	\$26
		<u>3114B</u>	<u>\$76</u>
<u>Barium</u>	<u>A1</u>	200.7	\$10
		200.8	\$26
	<u>C</u>	<u>3111D</u>	\$26
		<u>3113B</u>	\$26
Beryllium	<u>A1</u>	200.7	\$10
		200.8	\$26
		200.9	\$26
	<u>C</u>	<u>3113B</u>	\$26
<u>Cadmium</u>	<u>A1</u>	200.7	\$10
		200.8	\$26
		200.9	\$26
	<u>C</u>	<u>3113B</u>	\$26
Chromium, Total	<u>A1</u>	200.7	\$10
		200.8	\$26
		200.9	\$26
	<u>C</u>	<u>3113B</u>	\$26
Copper	<u>A1</u>	200.7	\$10
		200.8	<u>\$26</u>
		200.9	<u>\$26</u>
	<u>C</u>	<u>3111B</u>	\$26
		<u>3113B</u>	<u>\$26</u>

Iron	<u>A1</u>	200.7	<u>\$10</u>
		200.9	<u>\$26</u>
	<u>C</u>	<u>3111B</u>	<u>\$26</u>
		<u>3113B</u>	<u>\$26</u>
Lead	<u>A1</u>	200.8	<u>\$26</u>
		200.9	\$26
	<u>C</u>	<u>3113B</u>	\$26
Manganese	<u>A1</u>	200.7	\$10
		200.8	\$26
		200.9	\$26
	<u>C</u>	<u>3111B</u>	\$26
		<u>3113B</u>	\$26
Mercury	<u>A</u>	245.2	<u>\$52</u>
	<u>A1</u>	245.1	<u>\$52</u>
		200.8	\$26
	<u>C</u>	<u>3112B</u>	<u>\$52</u>
<u>Nickel</u>	<u>A1</u>	200.7	\$10
		200.8	\$26
		200.9	\$26
	<u>C</u>	<u>3111B</u>	\$26
		<u>3113B</u>	\$26
Selenium	<u>A1</u>	200.8	\$26
		200.9	\$26
	<u>C</u>	<u>3113B</u>	\$26
		<u>3114B</u>	<u>\$76</u>
Silver	<u>A1</u>	200.7	\$10
		200.8	\$26
		200.9	\$26
	<u>C</u>	<u>3111B</u>	\$26
		<u>3113B</u>	\$26
<u>Strontium</u>	<u>A1</u>	200.7	\$10
	<u>C</u>	3500-Sr B	\$26
		3500-Sr C	\$20
		3500-Sr D	\$26
Thallium	<u>A1</u>	200.8	\$26
		200.9	\$26

Notices of Final Rulemaking

<u>Uranium</u>	<u>A1</u>	200.8	\$26
Zinc	<u>A1</u>	200.7	\$10
		200.8	\$26
	<u>C</u>	<u>3111B</u>	<u>\$26</u>

4. Organic Chemistry of Drinking Water

a. Methods to Comply with National Primary Drinking Water Regulations

Description	Reference	Method/s	Fee Per Method
Disinfectant Byproducts, Solvents and Pesti-	<u>D3</u>	551.1 (1.0)	<u>\$116</u>
cides:			
<u>Alachlor</u>			
<u>Atrazine</u>			
<u>Dibromochloropropane</u>			
Endrin_			
Ethylene dibromide			
<u>Heptachlor</u>			
<u>Heptachlorepoxide</u>			
<u>Hexachlorobenzene</u>			
<u>Hexachlorocyclopentadiene</u>			
<u>Lindane</u>			
<u>Methoxychlor</u>			
<u>Simazine</u>			
1,1,2-Trichloroethane			
<u>Trichloroethylene</u>			
1,1,1-Trichloroethane			
<u>Tetrachloroethylene</u>			
<u>Carbontetrachloride</u>			
Chloroform			
Bromodichloromethane			
<u>Dibromochloromethane</u>			
Bromoform The definition of			
Total Trihalomethanes			

VOC-1 CC	D2	502.2 (2.1)	¢152
VOCs by GC:	<u>D3</u>	502.2 (2.1)	<u>\$152</u>
Benzene G. L. T. (11)			
Carbon Tetrachloride			
(mono) Chlorobenzene			
o-Dichlorobenzene			
para-Dichlorobenzene 1,2-Dichloroethane			
cis-1,2-Dichloroethylene			
Trans-1,2-Dichloroethylene			
Dichloromethane			
1,2-Dichloropropane			
Ethylbenzene			
Styrene			
<u>Tetrachloroethylene</u>			
1,1,1-Trichlorothane			
Trichloroethylene			
<u>Toluene</u>			
1,2,4-Trichlorobenzene			
1,1-Dichloroethylene			
1,1,2-Trichloroethane			
<u>Vinyl chloride</u>			
Xylenes, Total			
<u>Chloroform</u>			
Bromodichloromethane			
<u>Dibromochloromethane</u>			
Bromoform			
Total Trihalomethanes			
VOCs by GC-MS:	<u>D3</u>	524.2 (4.1)	<u>\$152</u>
<u>Benzene</u>			
<u>Carbon Tetrachloride</u>			
(mono) Chlorobenzene			
o-Dichlorobenzene			
o-Dichlorobenzene para-Dichlorobenzene			
o-Dichlorobenzene para-Dichlorobenzene 1,2-Dichloroethane			
o-Dichlorobenzene para-Dichlorobenzene 1,2-Dichloroethane cis-1,2-Dichloroethylene			
o-Dichlorobenzene para-Dichlorobenzene 1,2-Dichloroethane cis-1,2-Dichloroethylene Trans-1,2-Dichloroethylene			
o-Dichlorobenzene para-Dichlorobenzene 1,2-Dichloroethane cis-1,2-Dichloroethylene Trans-1,2-Dichloroethylene Dichloromethane			
o-Dichlorobenzene para-Dichlorobenzene 1,2-Dichloroethane cis-1,2-Dichloroethylene Trans-1,2-Dichloroethylene Dichloromethane 1,2-Dichloropropane			
o-Dichlorobenzene para-Dichlorobenzene 1,2-Dichloroethane cis-1,2-Dichloroethylene Trans-1,2-Dichloroethylene Dichloromethane 1,2-Dichloropropane Ethylbenzene			
o-Dichlorobenzene para-Dichlorobenzene 1,2-Dichloroethane cis-1,2-Dichloroethylene Trans-1,2-Dichloroethylene Dichloromethane 1,2-Dichloropropane Ethylbenzene Styrene			
o-Dichlorobenzene para-Dichlorobenzene 1,2-Dichloroethane cis-1,2-Dichloroethylene Trans-1,2-Dichloroethylene Dichloromethane 1,2-Dichloropropane Ethylbenzene Styrene Tetrachloroethylene			
o-Dichlorobenzene para-Dichlorobenzene 1,2-Dichloroethane cis-1,2-Dichloroethylene Trans-1,2-Dichloroethylene Dichloromethane 1,2-Dichloropropane Ethylbenzene Styrene Tetrachloroethylene 1,1,1-Trichlorothane			
o-Dichlorobenzene para-Dichlorobenzene 1,2-Dichloroethane cis-1,2-Dichloroethylene Trans-1,2-Dichloroethylene Dichloromethane 1,2-Dichloropropane Ethylbenzene Styrene Tetrachloroethylene			
o-Dichlorobenzene para-Dichlorobenzene 1,2-Dichloroethane cis-1,2-Dichloroethylene Trans-1,2-Dichloroethylene Dichloromethane 1,2-Dichloropropane Ethylbenzene Styrene Tetrachloroethylene 1,1,1-Trichlorothane Trichloroethylene Trichloroethylene			
o-Dichlorobenzene para-Dichlorobenzene 1,2-Dichloroethane cis-1,2-Dichloroethylene Trans-1,2-Dichloroethylene Dichloromethane 1,2-Dichloropropane Ethylbenzene Styrene Tetrachloroethylene 1,1,1-Trichlorothane Trichloroethylene Toluene			
o-Dichlorobenzene para-Dichlorobenzene 1,2-Dichloroethane cis-1,2-Dichloroethylene Trans-1,2-Dichloroethylene Dichloromethane 1,2-Dichloropropane Ethylbenzene Styrene Tetrachloroethylene 1,1,1-Trichlorothane Trichloroethylene Toluene 1,2,4-Trichlorobenzene			
o-Dichlorobenzene para-Dichlorobenzene 1,2-Dichloroethane cis-1,2-Dichloroethylene Trans-1,2-Dichloroethylene Dichloromethane 1,2-Dichloropropane Ethylbenzene Styrene Tetrachloroethylene 1,1,1-Trichlorothane Trichloroethylene 1,2,4-Trichlorobenzene 1,1 Dichloroethylene 1,1,2-Trichloroethylene 1,1,2-Trichloroethane Vinyl Chloride			
o-Dichlorobenzene para-Dichlorobenzene 1,2-Dichloroethane cis-1,2-Dichloroethylene Trans-1,2-Dichloroethylene Dichloromethane 1,2-Dichloropropane Ethylbenzene Styrene Tetrachloroethylene 1,1,1-Trichlorothane Trichloroethylene 1,2,4-Trichlorobenzene 1,1 Dichloroethylene 1,1,2-Trichloroethylene 1,1,2-Trichloroethane Vinyl Chloride Xylenes, Total			
o-Dichlorobenzene para-Dichlorobenzene 1,2-Dichloroethane cis-1,2-Dichloroethylene Trans-1,2-Dichloroethylene Dichloromethane 1,2-Dichloropropane Ethylbenzene Styrene Tetrachloroethylene 1,1,1-Trichlorothane Trichloroethylene 1,2,4-Trichlorobenzene 1,1 Dichloroethylene 1,1,2-Trichloroethylene 1,1,2-Trichloroethylene 1,1,2-Trichloroethane Vinyl Chloride Xylenes, Total Chloroform			
o-Dichlorobenzene para-Dichlorobenzene 1,2-Dichloroethane cis-1,2-Dichloroethylene Trans-1,2-Dichloroethylene Dichloromethane 1,2-Dichloropropane Ethylbenzene Styrene Tetrachloroethylene 1,1,1-Trichlorothane Trichloroethylene 1,2,4-Trichlorobenzene 1,1 Dichloroethylene 1,1,2-Trichloroethylene 1,1,2-Trichloroethane Vinyl Chloride Xylenes, Total Chloroform Bromodichloromethane			
o-Dichlorobenzene para-Dichlorobenzene 1,2-Dichloroethane cis-1,2-Dichloroethylene Trans-1,2-Dichloroethylene Dichloromethane 1,2-Dichloropropane Ethylbenzene Styrene Tetrachloroethylene 1,1,1-Trichlorothane Trichloroethylene 1,2,4-Trichlorobenzene 1,1 Dichloroethylene 1,1,2-Trichloroethylene 1,1,2-Trichloroethylene 1,1,1-Trichloroethylene 1,1,2-Trichloroethylene 1,1,1-Trichloroethylene 1,1,1-Trichloroethylene 1,1,1-Trichloroethylene 1,1,1-Trichloroethylene 1,1,1-Trichloroethylene			
o-Dichlorobenzene para-Dichlorobenzene 1,2-Dichloroethane cis-1,2-Dichloroethylene Trans-1,2-Dichloroethylene Dichloromethane 1,2-Dichloropropane Ethylbenzene Styrene Tetrachloroethylene 1,1,1-Trichlorothane Trichloroethylene 1,2,4-Trichlorobenzene 1,1 Dichloroethylene 1,1,2-Trichloroethylene 1,1,2-Trichloroethane Vinyl Chloride Xylenes, Total Chloroform Bromodichloromethane Dibromochloromethane Bromoform			
o-Dichlorobenzene para-Dichlorobenzene 1,2-Dichloroethane cis-1,2-Dichloroethylene Trans-1,2-Dichloroethylene Dichloromethane 1,2-Dichloropropane Ethylbenzene Styrene Tetrachloroethylene 1,1,1-Trichlorothane Trichloroethylene 1,2,4-Trichlorobenzene 1,1 Dichloroethylene 1,1,2-Trichloroethylene 1,1,2-Trichloroethylene 1,1,1-Trichloroethylene 1,1,2-Trichloroethylene 1,1,1-Trichloroethylene 1,1,1-Trichloroethylene 1,1,1-Trichloroethylene 1,1,1-Trichloroethylene 1,1,1-Trichloroethylene			
o-Dichlorobenzene para-Dichlorobenzene 1,2-Dichloroethylene Trans-1,2-Dichloroethylene Dichloromethane 1,2-Dichloropropane Ethylbenzene Styrene Tetrachloroethylene 1,1,1-Trichlorothane Trichloroethylene 1,2,4-Trichlorobenzene 1,1 Dichloroethylene 1,1,2-Trichloroethylene 1,1,2-Trichloroethane Vinyl Chloride Xylenes, Total Chloroform Bromodichloromethane Dibromochloromethane Bromoform	<u>D3</u>	504.1 (1.1)	\$116

	T		
Pesticides and PCBs by GC (Microextraction):	<u>D3</u>	<u>505 (2.1)</u>	<u>\$152</u>
Alachlor			
Atrazine			
Chlorodane			
Endrin Endrin			
<u>Heptachlor</u>			
<u>Heptachlor Epoxide</u>			
<u>Hexachlorobenzene</u>			
<u>Hexachlorocyclopentadiene</u>			
<u>Lindane</u>			
Methoxychlor			
Aroclor 1016			
Aroclor 1221			
Aroclor 1232			
Aroclor 1242			
Aroclor 1248			
Aroclor 1254			
Aroclor 1260			
Simazine Torrada and			
<u>Toxaphene</u>			
Phthalate and Adipate Esters by GC-PID:	<u>D3</u>	506 (1.1)	<u>\$116</u>
Di (2-ethylhexyl)adipate			
Di (2-ethylhexyl)phthalate			
D C 11 1 CC NDD	D2	507 (2.1)	ф11 <i>С</i>
Pesticides by GC-NPD	<u>D3</u>	<u>507 (2.1)</u>	<u>\$116</u>
Atrazine			
Alachlor Simazine			
Simazine			
Chlorinated Pesticides by GC-ECD:	<u>D3</u>	508 (3.1)	\$152
Chlordane			
Endrin			
Heptachlor			
Heptachlor Epoxide			
Hexachlorobenzene			
Hexachlorocyclopentadiene			
Lindane			
Methoxychlor			
Aroclor 1016			
Aroclor 1221			
Aroclor 1232			
Aroclor 1242			
Aroclor 1248			
Aroclor 1254			
Aroclor 1260			
<u>Toxaphene</u>			

F	T	T	1
Chlorinated Pesticides, Herbicides,	<u>D3</u>	508.1(2.0)	<u>\$152</u>
Organohalides by GC-ECD:			
<u>Alachlor</u>			
<u>Atrazine</u>			
<u>Chlorodane</u>			
Endrin			
Heptachlor			
Heptachlor Epoxide			
Hexachlorobenzene			
Hexachlorocyclopentadiene			
Lindane			
Methoxychlor			
Aroclor 1016			
Aroclor 1221			
Aroclor 1232			
Aroclor 1242			
Aroclor 1248			
Aroclor 1254			
Aroclor 1260			
<u>Simazine</u>			
<u>Toxaphene</u>			
Organics by GC-MS:	<u>D3</u>	525.2 (2.0)	\$152
Alachlor	<u>U3</u>	323.2 (2.0)	<u>\$132</u>
Atrazine			
Benzo(a)pyrene			
Chlorodane			
Di (2-ethylhexyl)adipate			
Di (2-ethylhexyl)phthalate			
<u>Endrin</u>			
<u>Heptachlor</u>			
<u>Heptachlor Epoxide</u>			
<u>Hexachlorobenzene</u>			
<u>Hexachlorocyclopentadiene</u>			
<u>Lindane</u>			
<u>Methoxychlor</u>			
Aroclor 1016			
Aroclor 1221			
Aroclor 1232			
Aroclor 1242			
Aroclor 1248			
Aroclor 1254			
Aroclor 1260			
Pentachlorophenol			
Simazine			
Toxaphene			
Carbamates by HPLC/Post Column:	<u>D3</u>	531.1 (3.1)	<u>\$116</u>
<u>Carbofuran</u>	D7	521.2	\$116
<u>Oxamyl</u>	<u>D7</u>	531.2	<u>\$116</u>
Chlorinated Acids and Dalapon by GC-ECD:	D	515.1 (4.0)	\$116
2,4-D			
<u>Dalapon</u>	<u>D6</u>	515.3 (1.0)	<u>\$116</u>
<u>Dinoseb</u>	D6	515 4 (1.0)	\$116
Pentachlorophenol	<u>D8</u>	515.4 (1.0)	<u>\$116</u>
Picloram			
<u>Silvex (2,4,5-TP)</u>			
D11 YOA (4, T, J 11)	1	Ī	ı

Chlorinated Acids By GC-ECD 2,4-D Dinoseb Pentachlorophenol Picloram Silvex (2,4,5-TP)	<u>D3</u>	515.2 (1.1)	<u>\$116</u>
PAHs By HPLC/UV/FL: Benzo(a)pyrene	<u>D1</u>	<u>550</u> <u>550.1</u>	\$116 \$116
Haloacetic Acids and Dalapon by GC-ECD:	<u>D2</u>	552.1 (1.0)	<u>\$116</u>
Dalapon Monochloracetic Acid Dichloracetic Acid Trichloroacetic Acid Monobromoacetic Acid Dibromoacetic Acid HAA5	<u>D3</u>	552.2 (1.0)	<u>\$116</u>
Haloacetic Acids: Monochloroacetic Acid Dichloroacetic Acid Trichloroacetic Acid Monobromoacetic Acid Dibromoacetic Acid HAA5	D13	552.3	\$116
Disinfection Byproducts by Micro Liquid-Liq- uid Extraction/GC-ECD	<u>C2</u>	<u>6251B</u>	\$116
Chlorinated Acids By HPLC/PDA/UV: 2.4-D Dinoseb Pentachlorophenol Picloram Silvex (2,4,5-TP)	D2	555 (1.0)	\$116
<u>Dioxin</u>	E	<u>1613</u>	<u>\$258</u>
Diquat	<u>D5</u>	549.2 (1.0)	<u>\$116</u>
Endothall	<u>D2</u>	548.1 (1.0)	\$116
Glyphosate	<u>D1</u>	<u>547</u>	\$116
PCBs (as decachlorobiphenyl)	D	508A (1.0)	<u>\$152</u>
b. Additional Methods and Compounds R	equired by Other P	<u>rograms</u>	
Description	Reference	Method/s	Fee Per Method
Disinfectant Byproducts, Solvents and Pesticides	<u>D3</u>	551.1 (1.0)	\$26
VOCs by GC	<u>D3</u>	502.2 (2.1)	<u>\$26</u>
VOCs by GC-MS	<u>D3</u>	524.2 (4.1)	<u>\$26</u>
EDB/DBCP	<u>D3</u>	504.1 (1.1)	<u>\$26</u>
Pesticides and PCBs by GC (Microextraction)	<u>D3</u>	505 (2.1)	<u>\$26</u>
Phthalate and Adipate Esters by GC-PID	<u>D3</u>	506 (1.1)	<u>\$26</u>
Pesticides by GC-NPD	<u>D3</u>	507 (2.1)	\$26

Chlorinated Pesticides by GC-ECD	<u>D3</u>	508 (3.1)	<u>\$26</u>
Chlorinated Pesticides, Herbicides, Organoha- lides by GC-ECD	<u>D3</u>	508.1(2.0)	\$26
Organics by GC-MS	<u>D3</u>	525.2 (2.0)	<u>\$26</u>
Carbamates by HPLC/Post Column	<u>D3</u>	531.1 (3.1)	<u>\$26</u>
	<u>D7</u>	<u>531.2</u>	<u>\$26</u>
Chlorinated Acids and Dalapon by GC-ECD	D	515.1 (4.0)	<u>\$26</u>
	<u>D6</u>	515.3 (1.0)	<u>\$26</u>
	<u>D8</u>	515.4 (1.0)	\$26
Chlorinated Acids By GC-ECD	<u>D3</u>	515.2 (1.1)	\$26
PAHs By HPLC/UV/FL	<u>D1</u>	<u>550</u>	\$26
		<u>550.1</u>	\$26
Haloacetic Acids and Dalapon by GC-ECD	<u>D2</u>	552.1 (1.0)	\$26
	<u>D3</u>	552.2 (1.0)	\$26
Chlorinated Acids By HPLC/PDA/UV	<u>D2</u>	555 (1.0)	\$26
Dioxins and Furans	E	<u>1613</u>	<u>\$65</u>
Diquat and Paraquat	<u>D5</u>	549.2 (1.0)	\$26
Benzidines and Nitrogen Compounds	<u>D2</u>	553 (1.1)	<u>\$116</u>
Carbonyl Compounds	<u>D2</u>	554 (1.0)	<u>\$116</u>
Phenols	Z	<u>528</u>	\$152
Phenylurea Compounds	Z	532	<u>\$116</u>
Selected Semivolatiles	Z	<u>526</u>	<u>\$152</u>
Pesticides and Flame Retardants by GCMS	<u>D9</u>	<u>527</u>	<u>\$152</u>
Explosives and Related Compounds	<u>D10</u>	<u>529</u>	<u>\$152</u>
Acetanilide Degradation Products	<u>D11</u>	535 (1.1)	<u>\$194</u>
Acetanilide Parent Compound	<u>D3</u>	525.2 (2.0)	\$26
Nitrosamines by MS/MS	<u>D12</u>	<u>521</u>	<u>\$194</u>
5. Radiochemistry of Drinking Water			<u>, </u>
Description	Reference	Method/s	Fee Per Method
	•	•	

Cesium	<u>B</u>	Cesium-134	<u>\$206</u>
	<u>C2</u>	7500-Cs B	<u>\$206</u>
		7120	<u>\$206</u>
	<u>J1</u>	<u>R-1110-76</u>	<u>\$206</u>
		<u>R-1111-76</u>	<u>\$206</u>
	<u>L</u>	901	<u>\$206</u>
		901.1	<u>\$206</u>
	<u>U</u>	4.5.2.3	<u>\$206</u>
	W	Gamma Spectra	<u>\$206</u>
Gamma Emitting Isotopes	<u>C2</u>	7500-Cs B	<u>\$206</u>
		7500-I B	<u>\$206</u>
		7120	<u>\$206</u>
	<u>L</u>	901.1	<u>\$206</u>
		901	<u>\$206</u>
		902	<u>\$206</u>
	W	Gamma Spectra	<u>\$206</u>
Gross Alpha	<u>B</u>	Gross Alpha	\$206
	<u>C2</u>	7110B	\$206
		7110C	\$206
	<u>J1</u>	R-1120-76	\$206
	L	900	\$206
	V	00-01	\$206
		00-02	\$206
	W	Gross Alpha	<u>\$206</u>
Gross Beta	<u>B</u>	Gross Beta	<u>\$206</u>
	<u>C2</u>	<u>7110B</u>	\$206
	<u>J1</u>	R-1120-76	\$206
	L	900	\$206
	V	00-01	<u>\$206</u>
	W	Gross Beta	<u>\$206</u>

Iodine	<u>B</u>	Precipitation Method, Distillation Method	\$206
	<u>C2</u>	7500-I B	<u>\$206</u>
		7500-I C	<u>\$206</u>
		7500-I D	<u>\$206</u>
		7120	\$206
	<u>L</u>	902	<u>\$206</u>
		901.1	<u>\$206</u>
	<u>U</u>	4.5.2.3	<u>\$206</u>
	W	Gamma Spectra	<u>\$206</u>
Radium 226	<u>B</u>	Radon Emanation, Precipitation Method	\$206
	<u>C2</u>	7500-Ra B	<u>\$206</u>
		7500-Ra C	<u>\$206</u>
	<u>J1</u>	<u>R-1140-76</u>	\$206
		<u>R-1141-76</u>	\$206
	<u>L</u>	903	\$206
		903.1	<u>\$206</u>
	<u>U</u>	<u>Ra-05</u>	\$206
	V	<u>Ra-03</u>	<u>\$206</u>
		<u>Ra-04</u>	<u>\$206</u>
	W	Radium 226	\$206
Radium 228	<u>B</u>	Radium 228	\$206
	<u>C2</u>	7500-Ra D	\$206
	<u>J1</u>	<u>R-1142-76</u>	\$206
	<u>L</u>	904	\$206
	V	<u>Ra-05</u>	\$206
	W	Radium 228	\$206
<u>Strontium</u>	<u>B</u>	Strontium	\$206
	<u>C2</u>	7500-Sr B	\$206
	<u>J1</u>	R-1160-76	\$206
	<u>L</u>	905	\$206
	<u>U</u>	<u>Sr-01</u>	<u>\$206</u>
		<u>Sr-02</u>	<u>\$206</u>
	V	<u>Sr-04</u>	<u>\$206</u>
	W	<u>Strontium</u>	\$206

Tritium	<u>B</u>	<u>Tritium</u>	<u>\$206</u>
	<u>C2</u>	7500- ³ H B	<u>\$206</u>
	<u>J1</u>	R-1171-76	<u>\$206</u>
	<u>L</u>	906	\$206
	V	<u>H-02</u>	\$206
	W	<u>Tritium</u>	\$206
<u>Uranium</u>	<u>C2</u>	7500-U B	\$206
	Ī	<u>D5174-91</u>	\$206
	<u>J1</u>	<u>R-1180-76</u>	\$206
		<u>R-1181-76</u>	\$206
		<u>R-1182-76</u>	\$206
	<u>L</u>	908	\$206
		908.1	\$206
	<u>U</u>	<u>U-02</u>	\$206
		<u>U-04</u>	\$206
	V	00-07	\$206
	W	<u>Uranium</u>	\$206

SECTION B. WASTEWATER PARAMETERS

1. Microbiology of Wastewater

Description	Reference	Method/s	Fee Per Method
Ascaris lumbricoides	<u>C2</u>	10550	\$228
	<u>P3</u>	<u>UofA2000</u>	\$228
Coliforms, Fecal, by Membrane Filter	<u>C2</u>	9222D	\$228
Coliforms, Fecal, by Multiple Tube Fermentation (may be used for sludge)	<u>C2</u>	9221E	\$228
Coliforms, Total, by Membrane Filter	<u>C2</u>	<u>9222B</u>	\$228
Coliforms, Total, by Multiple Tube Fermentation	<u>C2</u>	<u>9221B</u>	\$228
Entamoeba histolytica	<u>C2</u>	10550	\$228
	<u>C</u>	<u>9711C</u>	\$228
Enteric viruses	Ī	<u>D4994-89</u>	\$381
Escherichia coli (NPDES) by Colilert MPN, in conjunction with SM 9221B and 9221C	<u>C2</u>	9223B	<u>\$152</u>
Escherichia coli (NPDES) in conjunction with SM 9221B and 9221C	<u>C2</u>	9221F	<u>\$152</u>
Giardia and Cryptosporidium	<u>C2</u>	<u>9711B</u>	<u>\$381</u>
	<u>P2</u>	600/R-95/178	\$381
Helminth Ova in sludge	<u>Z5</u>	600/1-87-014	\$381

Salmonella in sludge	<u>C2</u>	9260D	\$228
Streptococcus, Fecal, by Membrane Filter	<u>C2</u>	9230C	<u>\$194</u>
Streptococcus, Fecal, by Multiple Tube Fermentation	<u>C2</u>	9230B	\$194
Tapeworm, Common	<u>C2</u>	10550	<u>\$228</u>
Viruses	<u>C2</u>	9510	<u>\$381</u>
	<u>P</u>	Methods for Virology	<u>\$381</u>
	<u>P2</u>	600/R-95/178	\$381
2. Wastewater Inorganic Chemistry, Nutries	nts and Demand	1	
Description	Reference	Method/s	Fee Per Method
Acidity	<u>C2</u>	<u>2310B</u>	\$39
	<u>C1</u>	Hach 8010	<u>\$39</u>
Alkalinity, Total	<u>A</u>	310.2	<u>\$19</u>
	<u>C2</u>	<u>2320B</u>	<u>\$19</u>
<u>Ammonia</u>	<u>A2</u>	<u>350.1</u>	\$39
	<u>C2</u>	<u>4500-NH₃ B</u>	<u>\$39</u>
		<u>4500-NH₃ C</u>	\$39
		<u>4500-NH₃ D</u>	<u>\$39</u>
		<u>4500-NH₃ E</u>	\$39
		<u>4500-NH₃ G</u>	\$39
	<u>C1</u>	Hach 8038	\$39
Biochemical Oxygen Demand	<u>C2</u>	<u>5210B</u>	<u>\$152</u>
	<u>C1</u>	Hach 8043	<u>\$152</u>
Boron	<u>A1</u>	200.7	<u>\$10</u>
	<u>C2</u>	4500-B B	<u>\$76</u>
Bromide	<u>A2</u>	300.0	<u>\$26</u>
Calcium	<u>A1</u>	200.7	\$10
	<u>C</u>	<u>3111B</u>	<u>\$26</u>
		3500-Ca D	\$39
	<u>C1</u>	Hach 8222	\$39
Carbon, Total Organic (TOC)	<u>C2</u>	<u>5310 B</u>	\$39
		<u>5310 C</u>	\$39
		<u>5310D</u>	\$39

Chemical Oxygen Demand	<u>A</u>	410.3	<u>\$39</u>
	<u>A2</u>	410.4	<u>\$76</u>
	<u>C2</u>	<u>5220 C</u>	\$39
		<u>5220 D</u>	<u>\$76</u>
	<u>C1</u>	<u>Hach 8000</u>	\$39
		<u>Hach 8230</u>	\$39
Chloride	<u>A2</u>	300.0	\$26
	<u>C2</u>	4500-C1 B	\$39
		4500-C1 C	\$39
		4500-C1 E	\$39
	<u>C1</u>	Hach 8225	\$39
Chlorine, Free	<u>C1</u>	Hach 8021	\$39
Chlorine, Total Residual	<u>C2</u>	4500-C1 B	\$39
		4500-C1 C	\$39
		4500-C1 D	\$39
		4500-C1 F	\$39
		4500-C1 G	\$39
	<u>C1</u>	<u>Hach 8167</u>	\$39
		<u>Hach 8168</u>	\$39
		<u>Hach 10014</u>	\$39
Color	<u>C2</u>	<u>2120 B</u>	<u>\$32</u>
		2120 C	\$32
		2120 E	<u>\$32</u>
Cyanide, Amenable to Chlorination	<u>A</u>	335.1	<u>\$76</u>
	<u>C2</u>	4500-CN G	<u>\$76</u>
Cyanide, Available	Y	<u>OIA-1677</u>	<u>\$76</u>
Cyanide, Total	A	335.3	<u>\$76</u>
	<u>C2</u>	4500-CN B and either (a) 4500-CN C, (b) 4500-CN D, or (c) 4500-CN E	\$89
Fluoride	<u>A2</u>	300.0	<u>\$26</u>
	<u>C2</u>	4500-F B	\$39
		4500-F C	\$39
		4500-F D	<u>\$39</u>
		4500-F E	<u>\$39</u>
	<u>C1</u>	Hach 8029	\$39
	_1	I .	1

<u>Hardness</u>	A	130.1	<u>\$10</u>
	<u>A1</u>	200.7	<u>\$10</u>
	<u>C2</u>	<u>2340B</u>	\$39
		<u>2340C</u>	\$39
	<u>C1</u>	Hach 8226	\$39
Kjeldahl, Total Nitrogen	A	<u>351.1</u>	<u>\$76</u>
		<u>351.4</u>	<u>\$76</u>
	<u>A2</u>	<u>351.2</u>	<u>\$76</u>
	<u>C2</u>	Combination of 4500-NH ₃ . B and either (a) 4500-N _{org} . B or (b) 4500-N _{org} C	<u>\$115</u>
		4500-NH ₃ C	\$39
	<u>Z10</u>	PAI-DK01	<u>\$76</u>
	<u>Z11</u>	PAI-DK02	<u>\$76</u>
	<u>Z12</u>	PAI-DK03	<u>\$76</u>
Methylene Blue Active Substances	<u>C2</u>	<u>5540C</u>	\$39
Nitrate (as N)	A	<u>352.1</u>	<u>\$76</u>
	<u>A2</u>	300.0	\$26
Nitrate-Nitrite (as N)	<u>A2</u>	300.0	\$26
		353.2	<u>\$76</u>
	<u>C2</u>	4500-NO ₃ E	<u>\$76</u>
		4500-NO ₃ F	<u>\$76</u>
		4500-NO ₃ H	<u>\$76</u>
Nitrite (as N)	A	<u>354.1</u>	<u>\$76</u>
	<u>A2</u>	300.0	<u>\$26</u>
	<u>C2</u>	4500-NO ₂ B	<u>\$76</u>
	<u>C1</u>	Hach 8507	<u>\$76</u>
Oil and Grease and Total Petroleum Hydrocar-	<u>C2</u>	<u>5520B</u>	<u>\$76</u>
bons	<u>K1</u>	<u>1664A</u>	<u>\$76</u>
Orthophosphate	<u>A</u>	<u>365.3</u>	<u>\$76</u>
	<u>A2</u>	300.0	\$26
		<u>365.1</u>	<u>\$76</u>
	<u>C2</u>	4500-P E	<u>\$76</u>
		4500-P F	<u>\$76</u>
	<u>C1</u>	Hach 8048	\$39
Oxygen-consumption Rate (SOUR)	<u>C2</u>	<u>2710B</u>	\$39

Oxygen, Dissolved	<u>C2</u>	<u>4500-O C</u>	<u>\$26</u>
		4500-O G	\$26
	<u>C1</u>	Hach 8229	\$26
pH (Hydrogen Ion)	<u>A</u>	150.1	\$39
	<u>C2</u>	4500-H B	\$39
	<u>C1</u>	Hach 8156	\$39
<u>Phenols</u>	<u>A</u>	420.1	<u>\$116</u>
	<u>C1</u>	Hach 8047	<u>\$116</u>
Phosphorus, Total	<u>A</u>	<u>365.3</u>	<u>\$76</u>
		<u>365.4</u>	<u>\$76</u>
	<u>A2</u>	365.1	<u>\$76</u>
	<u>C2</u>	4500-P B	<u>\$76</u>
		4500-P E	<u>\$76</u>
		4500-P F	<u>\$76</u>
	<u>C1</u>	Hach 8190	<u>\$76</u>
Potassium	<u>A</u>	<u>258.1</u>	<u>\$26</u>
	<u>A1</u>	200.7	\$10
	<u>C</u>	<u>3111B</u>	\$26
		3500-K D	\$26
Residue, Filterable (TDS)	<u>C2</u>	<u>2540C</u>	\$39
Residue, Nonfilterable (TSS)	<u>C2</u>	<u>2540D</u>	\$39
	<u>C1</u>	Hach 8158	\$39
Residue, Settleable Solids	<u>A</u>	160.5	\$39
	<u>C2</u>	<u>2540F</u>	\$39
Residue, Total	<u>A</u>	160.3	\$39
	<u>C2</u>	<u>2540B</u>	\$39
Residue, Volatile	<u>A</u>	160.4	\$39
Silica, Dissolved	<u>A</u>	370.1	<u>\$76</u>
	<u>A1</u>	200.7	\$10
	<u>C</u>	4500-Si D	<u>\$76</u>
	<u>C2</u>	4500-SiO ₂ C	<u>\$76</u>
Sodium	<u>A1</u>	200.7	\$10
	<u>C</u>	<u>3111B</u>	\$26
Sodium Azide	<u>C2</u>	<u>4110C</u>	<u>\$76</u>

Specific Conductance	<u>A</u>	120.1	\$39
	<u>C2</u>	<u>2510B</u>	\$39
	<u>C1</u>	Hach 8160	\$39
Sulfate	<u>A</u>	<u>375.1</u>	<u>\$76</u>
	<u>A2</u>	300.0	\$26
	<u>C2</u>	4500-SO ₄ C	<u>\$76</u>
		4500-SO ₄ D	<u>\$76</u>
	<u>C1</u>	Hach 8051	\$39
Sulfide (includes total and soluble)	<u>C2</u>	4500-S D	<u>\$76</u>
		4500-S F	\$39
	<u>C1</u>	Hach 8131	\$39
Sulfite	<u>C2</u>	4500-SO ₃ B	<u>\$76</u>
	<u>C1</u>	Hach 8071	\$39
Temperature, Degrees Celsius	<u>C2</u>	<u>2550B</u>	\$13
Total, Fixed and Volatile Solids in Solid and Semisolid Samples in Sludge	<u>C2</u>	<u>2540G</u>	\$39
Turbidity, NTU	<u>A2</u>	180.1	\$39
	<u>C2</u>	<u>2130B</u>	\$39
3. Metals in Wastewater	1		
a. Sample Preparation for Metals in Waste	ewater_		
<u>Description</u>	Reference	Method/s	Fee Per Method
Acid Extractable Metals	<u>C</u>	<u>3030C</u>	<u>\$7</u>
Microwave Digestion	<u>Z7</u>	CEM Microwave Digestion	<u>\$7</u>
Nitric Acid	<u>C</u>	<u>3030E</u>	\$7
Nitric Acid/Hydrochloric Acid	<u>C</u>	3030F	<u>\$7</u>
Nitric Acid/Perchloric Acid	<u>C</u>	<u>3030H</u>	<u>\$7</u>
Nitric Acid/Perchloric Acid/Hydrofluoric Acid	<u>C</u>	<u>3030I</u>	<u>\$7</u>
Nitric Acid/Sulfuric Acid	<u>C</u>	<u>3030G</u>	<u>\$7</u>
Preliminary Filtration	<u>C</u>	<u>3030B</u>	<u>\$7</u>
b. Methods to Analyze Metals in Wastewar	<u>ter</u>		
Description	Reference	Method/s	Fee Per Method
<u>Aluminum</u>	<u>A1</u>	200.7	<u>\$10</u>
		200.8	\$26
		200.9	\$26
	<u>C</u>	<u>3113B</u>	\$26
		<u>3111D</u>	<u>\$26</u>

Antimony	<u>A1</u>	200.7	\$10
		200.8	\$26
		200.9	<u>\$26</u>
	<u>C</u>	<u>3111B</u>	<u>\$26</u>
		<u>3113B</u>	<u>\$26</u>
Arsenic	<u>A</u>	206.5	\$39
	<u>A1</u>	200.7	\$10
		200.8	\$26
		200.9	\$26
	<u>C</u>	<u>3113B</u>	\$26
		3500-As C	<u>\$76</u>
	<u>C1</u>	Hach 8013	\$39
<u>Barium</u>	<u>A1</u>	200.7	\$10
		200.8	\$26
	<u>C</u>	<u>3111D</u>	\$26
		<u>3113B</u>	<u>\$26</u>
Beryllium	<u>A1</u>	200.7	<u>\$10</u>
		200.8	\$26
		200.9	\$26
	<u>C</u>	<u>3111D</u>	\$26
		<u>3113B</u>	\$26
		3500-Be D	<u>\$76</u>
<u>Cadmium</u>	<u>A1</u>	200.7	<u>\$10</u>
		200.8	\$26
		200.9	\$26
	<u>C</u>	<u>3111B</u>	\$26
		<u>3111C</u>	<u>\$26</u>
		<u>3113B</u>	<u>\$26</u>
		3500-Cd D	<u>\$76</u>
Chromium (VI) Hexavalent	<u>A</u>	218.4	<u>\$26</u>
	<u>C</u>	<u>3500-Cr D</u>	\$39
		<u>3111C</u>	<u>\$26</u>
	<u>C1</u>	Hach 8023	\$39

Chromium, Total	<u>A1</u>	200.7	\$10
		200.8	<u>\$26</u>
		200.9	\$26
	<u>C</u>	<u>3111B</u>	\$26
		<u>3111C</u>	\$26
		<u>3113B</u>	\$26
		3500-Cr D	<u>\$76</u>
	<u>C1</u>	Hach 8023	\$39
Cobalt	<u>A1</u>	200.7	\$10
		200.8	\$26
		200.9	\$26
	<u>C</u>	<u>3111B</u>	\$26
		<u>3111C</u>	\$26
		<u>3113B</u>	\$26
Copper	<u>A1</u>	200.7	\$10
		200.8	\$26
		200.9	\$26
	<u>C</u>	<u>3111B</u>	\$26
		<u>3111C</u>	\$26
		<u>3113B</u>	\$26
		3500-Cu D	<u>\$76</u>
	<u>C1</u>	Hach 8506	\$39
Gold	<u>A</u>	231.2	\$26
	<u>C</u>	<u>3111B</u>	\$26
<u>Iridium</u>	<u>A</u>	235.2	\$26
	<u>C</u>	<u>3111B</u>	\$26
<u>Iron</u>	<u>A1</u>	200.7	\$10
		200.9	\$26
	<u>C</u>	<u>3111B</u>	\$26
		<u>3111C</u>	\$26
		<u>3113B</u>	\$26
		3500-Fe D	<u>\$76</u>
	<u>C1</u>	Hach 8008	\$39

Lead	<u>A1</u>	200.7	\$10
		200.8	\$26
		200.9	\$26
	<u>C</u>	<u>3111B</u>	\$26
		<u>3111C</u>	\$26
		<u>3113B</u>	\$26
		3500-Pb D	<u>\$76</u>
	<u>C1</u>	Hach 8033	\$39
Lithium	<u>A1</u>	200.7	\$10
Magnesium	<u>A1</u>	200.7	\$10
	<u>C</u>	<u>3111B</u>	\$26
		3500-Mg D	<u>\$76</u>
<u>Manganese</u>	<u>A1</u>	200.7	<u>\$10</u>
		<u>200.8</u>	<u>\$26</u>
		200.9	<u>\$26</u>
	<u>C</u>	<u>3111B</u>	<u>\$26</u>
		<u>3113B</u>	<u>\$26</u>
		<u>3500-Mn D</u>	<u>\$76</u>
	<u>C1</u>	Hach 8034	\$39
Mercury	A	245.2	<u>\$52</u>
	<u>A1</u>	245.1	<u>\$52</u>
	<u>A4</u>	<u>1631E</u>	<u>\$152</u>
	<u>C</u>	<u>3112B</u>	<u>\$52</u>
Molybdenum	<u>A1</u>	200.7	\$10
		200.8	\$26
	<u>C</u>	<u>3111D</u>	\$26
		<u>3113B</u>	\$26
<u>Nickel</u>	<u>A1</u>	200.7	\$10
		200.8	\$26
		200.9	\$26
	<u>C</u>	<u>3111B</u>	\$26
		<u>3111C</u>	\$26
		<u>3113B</u>	\$26
	<u>C1</u>	Hach 8037	\$39
Osmium	<u>A</u>	252.2	\$26
	<u>C</u>	<u>3111D</u>	\$26

<u>Palladium</u>	<u>A</u>	253.2	<u>\$26</u>
	<u>C</u>	<u>3111B</u>	\$26
Platinum	<u>A</u>	255.2	\$26
	<u>C</u>	<u>3111B</u>	\$26
Rhodium	<u>A</u>	<u>265.2</u>	\$26
	<u>C</u>	<u>3111B</u>	\$26
Ruthenium	<u>A</u>	<u>267.2</u>	\$26
	<u>C</u>	<u>3111B</u>	\$26
<u>Selenium</u>	<u>A1</u>	200.7	\$10
		200.8	\$26
		200.9	\$26
	<u>C</u>	<u>3113B</u>	\$26
		<u>3114B</u>	<u>\$76</u>
Silver	<u>A1</u>	200.7	\$10
		200.8	\$26
		200.9	\$26
	<u>C</u>	<u>3111B</u>	\$26
		<u>3111C</u>	\$26
		<u>3113B</u>	\$26
Strontium	<u>A1</u>	200.7	\$10
	<u>C</u>	<u>3111B</u>	\$26
		3500-Sr B	\$26
		3500-Sr C	\$20
		3500-Sr D	\$26
<u>Thallium</u>	<u>A</u>	279.2	\$26
	<u>A1</u>	200.7	\$10
		200.8	\$26
		200.9	\$26
	<u>C</u>	<u>3111B</u>	\$26
<u>Tin</u>	<u>A1</u>	200.7	\$10
		200.9	\$26
	<u>C</u>	<u>3111B</u>	\$26
		<u>3113B</u>	\$26
<u>Titanium</u>	<u>A</u>	283.2	\$26
	<u>C</u>	<u>3111D</u>	\$26

<u>Vanadium</u>	<u>A1</u>	<u>200.7</u>	<u>\$10</u>
		200.8	<u>\$26</u>
	<u>C</u>	<u>3111D</u>	<u>\$26</u>
		3500-V D	<u>\$76</u>
Zinc	<u>A</u>	289.2	\$26
	<u>A1</u>	200.7	<u>\$10</u>
		200.8	\$26
		200.9	\$26
	<u>C</u>	<u>3111B</u>	\$26
		<u>3111C</u>	\$26
		<u>3500-Zn E</u>	<u>\$76</u>
		3500-Zn F	<u>\$76</u>
	<u>C1</u>	Hach 8009	\$39
4. Aquatic Toxicity Bioassay of Wastewater	-		,
Description	Reference	Method/s	Fee Per Method
Toxicity, Acute	<u>M1</u>	EPA/600/4-90/027F	<u>\$194</u>
	<u>Z13</u>	821-R-02-012	<u>\$194</u>
Toxicity, Chronic	<u>N1</u>	EPA/600/4-91/002	<u>\$194</u>
	<u>Z3</u>	821-R-02-013	<u>\$194</u>
5. Organic Chemicals of Wastewater	_1	1	
Description	Reference	Method/s	Fee Per Method
Volatile Organics for Pharmaceuticals	<u>D3</u>	524.2 (4.1)	<u>\$152</u>
Purgeable Hydrocarbons	20		
D 11 A	<u>E</u>	<u>601</u>	<u>\$76</u>
<u>Purgeable Aromatics</u>			\$76 \$76
Acrolein and Acrylonitrile	E	601	
	<u>E</u>	<u>601</u> <u>602</u>	<u>\$76</u>
	<u>E</u>	601 602 603 624 (Approved for screening only, not for quantifi-	\$76 \$76
	<u>E</u>	601 602 603 624 (Approved for screening only, not for quantification)	\$76 \$76 \$152
Acrolein and Acrylonitrile	E E E	601 602 603 624 (Approved for screening only, not for quantification) 1624B	\$76 \$76 \$152 \$152
Acrolein and Acrylonitrile Phenols	E E E	601 602 603 624 (Approved for screening only, not for quantification) 1624B 604	\$76 \$76 \$152 \$152 \$116
Acrolein and Acrylonitrile Phenols Phthalate ester	E E E E	601 602 603 624 (Approved for screening only, not for quantification) 1624B 604 606	\$76 \$76 \$152 \$152 \$116 \$116
Acrolein and Acrylonitrile Phenols Phthalate ester Nitrosamines	E E E E E	601 602 603 624 (Approved for screening only, not for quantification) 1624B 604 606 607	\$76 \$76 \$152 \$152 \$116 \$116
Acrolein and Acrylonitrile Phenols Phthalate ester Nitrosamines Organochlorine Pesticides and PCBs	E E E E E E E	601 602 603 624 (Approved for screening only, not for quantification) 1624B 604 606 607 608	\$76 \$76 \$152 \$152 \$116 \$116 \$116 \$152
Acrolein and Acrylonitrile Phenols Phthalate ester Nitrosamines Organochlorine Pesticides and PCBs Nitroaromatics and Isophorone	E E E E E E E	601 602 603 624 (Approved for screening only, not for quantification) 1624B 604 606 607 608	\$76 \$76 \$152 \$152 \$116 \$116 \$116 \$152 \$116

2, 3, 7, 8-Tetrachlorodibenzo-p-Dioxin	E	613	\$457
Carbon-, Hydrogen-, and Oxygen-Containing Pesticides	<u>Z2</u>	616	\$116
Purgeables	E	624	<u>\$152</u>
Base/Neutrals and Acids (all analytes excluding pesticides)	E	625	<u>\$152</u>
Base/Neutrals and Acids (pesticides only)	E	<u>625</u>	<u>\$152</u>
Tetra- through Octa-Chlorinated Dioxins and Furans	E	<u>1613B</u>	\$258
VOCs by Isotope Dilution GC/MS	E	<u>1624B</u>	<u>\$152</u>
Semivolatile Organic Compounds by Isotope Dilution GC/MS	E	<u>1625B</u>	<u>\$152</u>
Organophosphorus Pesticides	E	1657	\$116
VOCs Specific to the Pharmaceutical Manufacturing Industry by Isotope Dilution GC/MS	<u>K2</u>	1666 (A)	<u>\$152</u>
<u>Herbicides</u>	<u>C2</u>	<u>6640B</u>	<u>\$116</u>
Ethylene Glycol	<u>K</u>	BLS-188	<u>\$152</u>
6. Radiochemistry of Wastewater			
Description	Reference	Method/s	Fee Per Method
Gross Alpha	<u>C2</u>	<u>7110B</u>	\$206
	L	900	\$206
Gross Beta	<u>C2</u>	<u>7110B</u>	\$206
	L	900.0	\$206
Radium, Total	<u>C2</u>	7500-Ra B	\$206
	L	903.0	\$206
Radium 226	<u>C2</u>	7500-Ra C	\$206
	<u>L</u>	903.1	\$206
SECTION	C. SOLID WASTE	E PARAMETERS	
1. Microbiology of Solid Waste			
Description	Reference	Method/s	Fee Per Method
Coliforms, Total, by Membrane Filter	<u>F</u>	9132	\$228
Coliforms, Total, by Multiple Tube Fermentation	E	9131	\$228
2. Physical Properties Testing of Solid Waste			
Daniel de la companya	Deferre	Method/s	Fee Per Method
<u>Description</u>	<u>Reference</u>	TYTOUROU, B	
Corrosive to Steel	<u>F</u>	1110A	\$63

Ignitability (Flashpoint Determination)	<u>F</u>	<u>1010A</u>	\$32
		<u>1020B</u>	\$32
Paint Filter Liquids Test	<u>F</u>	9095B	\$19
TCLP	<u>F</u>	1311	\$303
3. Sample Preparation for Metals in Solid	Waste		
Description	Reference	Method/s	Fee Per Method
Dissolved in Water	E	3005A	<u>\$7</u>
Microwave Assisted Digestions	E	<u>3015A</u>	<u>\$7</u>
		<u>3051</u>	<u>\$7</u>
		<u>3052</u>	<u>\$7</u>
Oils, Greases, and Waxes	<u>F</u>	<u>3040A</u>	<u>\$7</u>
		<u>3031</u>	<u>\$7</u>
Sediments, Sludges, and Soils	<u>F</u>	<u>3050B</u>	<u>\$7</u>
Total Metals	E	<u>3010A</u>	<u>\$7</u>
		<u>3020A</u>	<u>\$7</u>
Total Recoverable in Water	<u>F</u>	<u>3005A</u>	<u>\$7</u>
4. Inorganic Chemistry and Metals of Soli	id Waste	•	<u> </u>
<u>Description</u>	Reference	Method/s	Fee Per Method
Aluminum	<u>F</u>	<u>6010B</u>	\$10
		6020	\$26
	<u>F11</u>	<u>7000B</u>	\$26
<u>Ammonia</u>	<u>A</u>	350.3	\$39
Antimony	<u>F</u>	<u>6010B</u>	\$10
		6020	\$26
		7062	<u>\$76</u>
	<u>F11</u>	<u>7000B</u>	\$26
	<u>F12</u>	7010	\$26
Arsenic	<u>F</u>	<u>6010B</u>	\$10
		<u>7061A</u>	<u>\$76</u>
		7062	<u>\$76</u>
		7063	<u>\$76</u>
		6020	\$26
	<u>F12</u>	7010	<u>\$26</u>

Barium	<u>F</u>	<u>6010B</u>	<u>\$10</u>
		6020	<u>\$26</u>
	<u>F11</u>	7000B	<u>\$26</u>
	<u>F12</u>	7010	<u>\$26</u>
Beryllium	<u>F</u>	<u>6010B</u>	<u>\$10</u>
		6020	<u>\$26</u>
	<u>F11</u>	<u>7000B</u>	<u>\$26</u>
	<u>F12</u>	7010	<u>\$26</u>
Bomb Preparation Method for Solid Waste	<u>F</u>	5050	<u>\$7</u>
Boron	<u>F</u>	<u>6010B</u>	<u>\$10</u>
Bromide	<u>F</u>	9056	<u>\$26</u>
		9211	\$39
Cadmium	<u>F</u>	<u>6010B</u>	<u>\$10</u>
		6020	<u>\$26</u>
	<u>F11</u>	7000B	<u>\$26</u>
	<u>F12</u>	7010	<u>\$26</u>
Calcium	<u>F</u>	<u>6010B</u>	<u>\$10</u>
	<u>F11</u>	7000B	<u>\$26</u>
Cation-Exchange Capacity of Soils	<u>F</u>	9080	<u>\$34</u>
		9081	<u>\$34</u>
Chloride	<u>F</u>	9056	<u>\$26</u>
		9057	<u>\$76</u>
		9212	\$39
		9250	<u>\$76</u>
		9251	<u>\$76</u>
		9253	<u>\$39</u>
Chlorine, Total, in New and Used Petroleum	<u>F</u>	9075	<u>\$76</u>
Products		9076	<u>\$39</u>
		9077	<u>\$39</u>
Chromium, Hexavalent	<u>F</u>	7195	<u>\$26</u>
		<u>7196A</u>	<u>\$76</u>
		7197	<u>\$26</u>
		7198	\$40
		7199	<u>\$76</u>

Chromium, Total	<u>F</u>	<u>6010B</u>	<u>\$10</u>
		6020	<u>\$26</u>
	<u>F11</u>	7000B	\$26
	<u>F12</u>	7010	\$26
Cobalt	<u>F</u>	<u>6010B</u>	<u>\$10</u>
		6020	<u>\$26</u>
	<u>F11</u>	<u>7000B</u>	<u>\$26</u>
	<u>F12</u>	7010	<u>\$26</u>
Compatibility Test for Wastes and Membranes Liners	E	<u>9090A</u>	<u>\$152</u>
<u>Copper</u>	<u>F</u>	<u>6010B</u>	<u>\$10</u>
		6020	<u>\$26</u>
	<u>F11</u>	<u>7000B</u>	<u>\$26</u>
	<u>F12</u>	7010	<u>\$26</u>
Cyanide	<u>F</u>	<u>9010C</u>	<u>\$13</u>
		<u>9012B</u>	<u>\$76</u>
		9213	<u>\$76</u>
		9014	<u>\$76</u>
	<u>F9</u>	9015	<u>\$76</u>
Cyanide Extraction for Solids and Oils	<u>F10</u>	<u>9013A</u>	\$39
Dermal Corrosion	F	1120	<u>\$63</u>
EP for Oily Wastes	F	<u>1330A</u>	<u>\$76</u>
Flashpoint Determination	<u>F</u>	1030	\$32
Fluoride	F	9056	\$26
		9214	\$39
Iron	F	<u>6010B</u>	<u>\$10</u>
	<u>F11</u>	<u>7000B</u>	<u>\$26</u>
	<u>F12</u>	7010	<u>\$26</u>
Kjeldahl Total, Nitrogen	A	351.4	<u>\$76</u>
Lead	<u>F</u>	<u>6010B</u>	<u>\$10</u>
		6020	\$26
	<u>F11</u>	<u>7000B</u>	\$26
	<u>F12</u>	7010	<u>\$26</u>
Liquid Release Test Procedure	<u>F</u>	9096	\$39
Lithium	E	<u>6010B</u>	<u>\$10</u>
	<u>F11</u>	<u>7000B</u>	<u>\$26</u>

Magnesium	<u>F</u>	<u>6010B</u>	<u>\$10</u>
	<u>F11</u>	<u>7000B</u>	<u>\$26</u>
Manganese	<u>F</u>	<u>6010B</u>	<u>\$10</u>
		6020	\$26
	<u>F11</u>	<u>7000B</u>	\$26
	<u>F12</u>	7010	\$26
<u>Mercury</u>	<u>F</u>	<u>7470A</u>	<u>\$52</u>
		<u>7471A</u>	<u>\$52</u>
		7472	<u>\$152</u>
Molybdenum	<u>F</u>	<u>6010B</u>	<u>\$10</u>
	<u>F11</u>	<u>7000B</u>	<u>\$26</u>
	<u>F12</u>	7010	<u>\$26</u>
Multiple EP	<u>F</u>	1320	<u>\$152</u>
<u>Nickel</u>	<u>F</u>	<u>6010B</u>	<u>\$10</u>
		6020	<u>\$26</u>
	<u>F11</u>	<u>7000B</u>	<u>\$26</u>
	<u>F12</u>	7010	<u>\$26</u>
Nitrate	<u>F</u>	9210	\$39
		9056	<u>\$26</u>
<u>Nitrite</u>	E	9056	\$26
Oil and Grease and Petroleum Hydrocarbons	<u>K1</u>	<u>1664A</u>	<u>\$76</u>
O-Phosphate-P	<u>F</u>	9056	<u>\$26</u>
Osmium	E	<u>6010B</u>	<u>\$10</u>
	<u>F11</u>	<u>7000B</u>	\$26
Paint Filter Liquids Test	<u>F</u>	<u>9095B</u>	<u>\$19</u>
Perchlorate	Z	314.0	<u>\$76</u>
pH (Hydrogen Ion)	<u>F</u>	<u>9041A</u>	\$39
		9045D	\$39
Phosphorus	<u>F</u>	<u>6010B</u>	<u>\$10</u>
Phosphorus, Total	<u>A</u>	<u>365.3</u>	<u>\$76</u>
Potassium	E	<u>6010B</u>	<u>\$10</u>
	<u>F11</u>	<u>7000B</u>	<u>\$26</u>
Saturated Hydraulic and Leachate Conductivity and Intrinsic Permeability	F	9100	\$152

<u>Selenium</u>	<u>F</u>	<u>6010B</u>	<u>\$10</u>
		<u>7741A</u>	\$26
		7742	<u>\$76</u>
	<u>F12</u>	7010	<u>\$26</u>
Silica	<u>F</u>	<u>6010B</u>	<u>\$10</u>
Silver	E	<u>6010B</u>	<u>\$10</u>
		6020	\$26
	F11	<u>7000B</u>	\$26
	<u>F12</u>	7010	\$26
<u>Sodium</u>	E	<u>6010B</u>	<u>\$10</u>
	<u>F11</u>	<u>7000B</u>	\$26
Sodium Azide	<u>C2</u>	<u>4110C</u>	<u>\$76</u>
Specific Conductance	E	<u>9050A</u>	\$39
SPLP	E	1312	\$303
Strontium	E	<u>6010B</u>	<u>\$10</u>
	<u>F11</u>	<u>7000B</u>	<u>\$26</u>
Sulfate	<u>F</u>	9035	<u>\$76</u>
		9036	<u>\$76</u>
		9038	<u>\$76</u>
		9056	<u>\$26</u>
Sulfides	<u>F</u>	<u>9030B</u>	<u>\$76</u>
		9031	<u>\$76</u>
		9215	<u>\$76</u>
		9034	<u>\$76</u>
Thallium	<u>F</u>	<u>6010B</u>	<u>\$10</u>
		6020	<u>\$26</u>
	<u>F11</u>	<u>7000B</u>	\$26
	<u>F12</u>	7010	<u>\$26</u>
<u>Tin</u>	<u>F</u>	<u>6010B</u>	<u>\$10</u>
	<u>F11</u>	<u>7000B</u>	\$26
<u>Titanium</u>	<u>F</u>	<u>6010B</u>	\$10
<u>Vanadium</u>	E	<u>6010B</u>	\$10
	<u>F11</u>	<u>7000B</u>	\$26
	<u>F12</u>	7010	\$26
White Phosphorus by GC	<u>F</u>	7580	<u>\$116</u>

Zinc	<u>F</u>	<u>6010B</u>	<u>\$10</u>
		6020	\$26
	<u>F11</u>	<u>7000B</u>	<u>\$26</u>
	<u>F12</u>	7010	<u>\$26</u>
5. Organics Procedures in Solid Waste			
Description	Reference	Method/s	Fee Per Method
Separatory Funnel Liquid-Liquid Extraction	<u>F</u>	<u>3510C</u>	\$13
Organic Compounds in Water by Microextraction	<u>F5</u>	3511	\$13
Continuous Liquid-Liquid Extraction	<u>F</u>	<u>3520C</u>	\$13
SPE	<u>F</u>	<u>3535</u>	\$13
Soxhlet Extraction	<u>F</u>	<u>3540C</u>	\$13
Automated Soxhlet Extraction	<u>F</u>	<u>3541</u>	\$13
Pressurized Fluid Extraction	<u>F</u>	<u>3545</u>	\$13
Ultrasonic Extraction	<u>F</u>	<u>3550B</u>	\$13
Supercritical Fluid Extraction of Total Recoverable Petroleum Hydrocarbons	E	<u>3560</u>	\$13
Supercritical Fluid Extraction of PAHs	<u>F</u>	<u>3561</u>	\$13
MSE	<u>F4</u>	3570	\$13
Waste Dilution	<u>F</u>	<u>3580A</u>	\$13
Waste Dilution for Volatile Organics	<u>F</u>	<u>3585</u>	\$13
Alumina Cleanup	<u>F</u>	<u>3610B</u>	\$13
Alumina Column Cleanup and Separation of Petroleum Wastes	F	<u>3611B</u>	\$13
Florisil Cleanup	<u>F</u>	<u>3620B</u>	\$13
Silica Gel Cleanup	<u>F</u>	<u>3630C</u>	\$13
Gel-Permeation Cleanup	<u>F</u>	<u>3640A</u>	\$13
Acid-Base Partition Cleanup	<u>F</u>	<u>3650B</u>	\$13
Sulfur Cleanup	<u>F</u>	<u>3660B</u>	\$13
Sulfuric Acid/Permanganate Cleanup	<u>F</u>	<u>3665A</u>	\$13
Screening for Pentachlorophenol by Immunoassay	E	4010A	<u>\$76</u>
Screening for 2,4-Dichlorophenoxyacetic Acid by Immunoassay	F	4015	<u>\$76</u>
Screening for PCBs by Immunoassay	<u>F</u>	4020	<u>\$76</u>
Screening for PCDDs and PCDFs by Immunoassay	<u>F3</u>	4025	<u>\$76</u>
Soil Screening for Petroleum Hydrocarbons by Immunoassay	E	4030	<u>\$76</u>

Soil Screening for PAHs by Immunoassay	<u>F</u>	4035	<u>\$76</u>
Soil Screening for Toxaphene by Immunoas- say	<u>F</u>	4040	<u>\$76</u>
Soil Screening for Chlordane by Immunoassay	<u>F</u>	4041	<u>\$76</u>
Soil Screening for DDT by Immunoassay	<u>F</u>	4042	<u>\$76</u>
TNT Explosives in Soil by Immunoassay	<u>F</u>	4050	<u>\$76</u>
RDX in Soil by Immunoassay	<u>F</u>	4051	<u>\$76</u>
VOCs in Various Sample Matrices Using Equilibrium Headspace Analysis	<u>F8</u>	<u>5021A</u>	\$13
Purge-and-Trap for Aqueous Samples	<u>F6</u>	<u>5030C</u>	<u>\$13</u>
Volatile, Nonpurgeable, Water-Soluble Compounds by Azeotropic Distillation	F	5031	\$13
VOCs by Vacuum Distillation	<u>F</u>	5032	<u>\$13</u>
Closed-System Purge-and-Trap and Extraction for Volatile Organics in Soil and Waste Sam- ples	<u>F2</u>	<u>5035A</u>	\$13
Analysis for Desorption of Sorbent Cartridges from VOST	E	<u>5041A</u>	\$13
EDB and DBCP by Microextraction and GC	<u>F</u>	8011	<u>\$116</u>
C ₁₀ – C ₃₂ Hydrocarbons	<u>K</u>	8015AZ 1	<u>\$116</u>
Nonhalogenated Organics Using GC/FID	<u>F7</u>	8015D	<u>\$116</u>
Aromatic and Halogenated Volatiles by GC Using Photoionization and/or Electrolytic Conductivity Detectors	F	8021B	\$152
Acrylonitrile by GC	<u>F</u>	8031	<u>\$76</u>
Acrylamide by GC	<u>F</u>	<u>8032A</u>	<u>\$76</u>
Acetonitrile by GC with Nitrogen-Phosphorus Detection	<u>F</u>	8033	<u>\$76</u>
Phenols by GC	<u>F</u>	8041	<u>\$116</u>
Phthalate Esters by GC/ECD	<u>F</u>	8061A	<u>\$116</u>
Nitrosamines by GC	<u>F</u>	<u>8070A</u>	<u>\$116</u>
Organochlorine Pesticides by GC	<u>F</u>	8081A	<u>\$152</u>
PCBs by GC	<u>F</u>	8082	<u>\$152</u>
Nitroaromatics and Cyclic Ketones by GC	<u>F</u>	8091	<u>\$116</u>
PAHs	<u>F</u>	8100	<u>\$116</u>
Haloethers by GC	<u>F</u>	8111	<u>\$116</u>
Chlorinated Hydrocarbons by GC: Capillary Column Technique	<u>F</u>	8121	\$116
Aniline and Selected Derivatives by GC	<u>F</u>	8131	<u>\$116</u>
Organophosphorus Compounds by GC	<u>F</u>	<u>8141A</u>	<u>\$152</u>

Chlorinated Herbicides by GC Using Methyla-	F	8151A	\$152
tion or Pentafluorobenzylation Derivatization	<u>r</u>	<u>oisia</u>	<u>\$132</u>
VOCs by GC/MS	<u>F</u>	<u>8260B</u>	<u>\$152</u>
Semivolatile Organic Compounds by GC/MS	<u>F</u>	<u>8270C</u>	<u>\$152</u>
Semivolatile Organic Compounds (PAHs and PCBs) in Soils/Sludges and Solid Wastes Using TE/GC/MS	Ē	8275A	<u>\$152</u>
8280A: Polychlorinated Dibenzo-p-Dioxins and PCDFs by HRGC/LRMS	F	8280A	\$258
PCDDs and PCDFs by HRGC/HRMS	<u>F</u>	8290	<u>\$258</u>
PAHs	<u>F</u>	8310	<u>\$116</u>
Determination of Carbonyl Compounds by HPLC	E	<u>8315A</u>	\$116
Acrylamide, Acrylonitrile, and Acrolein by HPLC	E	8316	\$116
N-Methylcarbamates by HPLC	F	8318	<u>\$116</u>
Solvent-Extractable Nonvolatile Compounds by HPLC/TS/MS or UV Detection	E	<u>8321A</u>	\$152
Solvent Extractable Nonvolatile Compounds by HPLC/PB/MS	<u>F</u>	8325	\$152
Nitroaromatics and Nitramines by HPLC	E	8330	<u>\$116</u>
Tetrazene by Reverse Phase HPLC	<u>F</u>	8331	<u>\$116</u>
Nitroglycerine by HPLC	<u>F</u>	8332	<u>\$116</u>
GC/FT-IR Spectrometry for Semivolatile Organics: Capillary Column	<u>F</u>	8410	\$116
Analysis of Bis (2-chloroethyl) Ether and Hydrolysis Products by Direct Aqueous Injection GC/FT-IR	Ē	8430	<u>\$116</u>
Total Recoverable Petroleum Hydrocarbons by Infrared Spectrophotometry	<u>F</u>	8440	\$116
Colorimetric Screening Method for TNT in Soil	<u>F</u>	<u>8515</u>	<u>\$76</u>
TOX	<u>F</u>	<u>9020B</u>	<u>\$76</u>
POX	<u>F</u>	9021	<u>\$76</u>
TOX by Neutron Activation Analysis	<u>F</u>	9022	<u>\$114</u>
EOX in Solids	<u>F</u>	9023	<u>\$114</u>
TOCs	<u>F</u>	<u>9060A</u>	<u>\$76</u>
Phenolics	<u>F</u>	9065	<u>\$152</u>
		9066	<u>\$152</u>
		9067	<u>\$152</u>
HEM for Aqueous Samples	E	<u>9070A</u>	<u>\$76</u>

HEM for Sludge, Sediment, and Solid Sam-	F	9071B	\$76
ples	<u>r</u>	90/1B	370
PCBs in Waste Oil	<u>F1</u>	600/4-81-045	<u>\$152</u>
6. Bulk Asbestos Analysis of Solid Waste			·
Description	Reference	Method/s	Fee Per Method
Bulk Asbestos Analysis	G	9002	\$228
	<u>H</u>	Bulk Asbestos	\$228
Fiber Counting	<u>G</u>	7400	\$228
		7402	<u>\$228</u>
7. Radiochemistry of Solid Waste	•	•	·
Description	Reference	Method/s	Fee Per Method
Alpha-Emitting Radium Isotopes	<u>F</u>	9315	\$206
Gross Alpha and Beta	<u>F</u>	9310	\$206
Radium-228	<u>F</u>	9320	\$206
SECTION	D. AIR AND STA	CK PARAMETERS	•
1. Ambient Air Primary and Secondary Pol	<u>lutants</u>		
Description	Reference	Method/s	Fee Per Method
Carbon Monoxide	<u>O</u>	Appendix C	\$393
Formaldehyde	<u>F</u>	8520	\$393
<u>Hydrocarbons</u>	<u>O</u>	Appendix E	\$393
Lead	<u>O</u>	Appendix G	\$393
Nitrogen Dioxide	<u>O</u>	Appendix F	\$393
Ozone	<u>O</u>	Appendix D	\$393
		Appendix H	\$393
Particulate Matter	<u>O</u>	Appendix B	\$393
		Appendix J	\$393
		Appendix K	\$393
Sulfur Oxides	<u>O</u>	Appendix A	\$393

2. Stationary and Stack Sources			
<u>Description</u>	Reference	Method/s	Fee Per Method
Carbon Dioxide, Oxygen, and Excess Air	Q	Method 3	<u>\$393</u>
Carbon Monoxide	Q	Method 10	<u>\$393</u>
		Method 10A	<u>\$393</u>
		Method 10B	<u>\$393</u>
Carbonyl Sulfide, Hydrogen Sulfide, and Carbon Disulfide	Q	Method 15	<u>\$393</u>
Fluoride	Q	Method 13A	\$393
		Method 13B	\$393
		Method 14	<u>\$393</u>
Fugitive Emissions	Q	Method 22	\$393
Gaseous Organic Compounds	Q	Method 18	<u>\$393</u>
		Method 25	<u>\$393</u>
		Method 25A	<u>\$393</u>
		Method 25B	\$393
Hydrogen Sulfide	Q	Method 11	<u>\$393</u>
Inorganic Lead	Q	Method 12	<u>\$393</u>
Moisture Content	Q	Method 4	<u>\$393</u>
Nitrogen Oxide	Q	Method 7	<u>\$393</u>
		Method 7A	<u>\$393</u>
		Method 7B	\$393
		Method 7C	<u>\$393</u>
		Method 7D	<u>\$393</u>
		Method 7E	<u>\$393</u>
		Method 19	<u>\$393</u>
		Method 20	<u>\$393</u>
Particulate Emissions by Asphalt Processing	Q	Method 5A	<u>\$152</u>
Particulate Emissions by Fiberglass Insulation	Q	Method 5E	<u>\$152</u>
Particulate Emissions by Nonsulfate	Q	Method 5F	<u>\$152</u>
Particulate Emissions by Nonsulfuric Acid	Q	Method 5B	<u>\$152</u>
Particulate Emissions by Pressure Filters	Q	Method 5D	<u>\$152</u>
Particulate Emissions by Stationary Sources	Q	Method 5	<u>\$152</u>
		Method 17	<u>\$152</u>
Particulate Emissions by Sulfur Dioxide	Q	Method 19	<u>\$152</u>

Particulate Emissions by Wood Heaters	Q	Method 5G	<u>\$152</u>
		Method 5H	<u>\$152</u>
Petroleum Products, Heat of Combustion	Ī	D240-92	<u>\$76</u>
		D240-87	<u>\$76</u>
Petroleum Products, Hydrometer Method	I	<u>D287-92</u>	<u>\$76</u>
Petroleum Products, Sulfur	Ī	D4294-90	<u>\$152</u>
Sulfur and Total Reduced Sulfur	Q	Method 15A	\$393
		Method 16	\$393
		Method 16A	\$393
		Method 16B	\$393
Sulfur Dioxide	Q	Method 6	\$393
		Method 6A	\$393
		Method 6B	\$393
		Method 6C	\$393
		Method 8	\$393
		Method19	\$393
		Method 20	\$393
Sulfuric Acid Mist	Q	Method 8	\$393
Vapor Tightness, Gasoline Delivery Tank	Q	Method 27	\$393
Volatile Matter Density, Solids and Water	Q	Method 24	\$393
		Method 24A	\$393
<u>VOCs</u>	Q	Method 21	\$393
	<u>S1</u>	<u>TO-15</u>	<u>\$152</u>
Wood Heaters, Certification and Burn Rates	Q	Method 28	\$393
		Method 28A	\$393
3. ADEQ Emission Test			
Description	Reference	Method/s	Fee Per Method
Particulate Emissions, Dry Matter	<u>R</u>	Method A2	\$393
Particulate Emissions, Sulfuric Acid Mist/Sulfur Oxides	<u>R</u>	Method A1	\$393

4. National Emission Standards for Hazardous Air Pollutants			
<u>Description</u>	Reference	Method/s	Fee Per Method
Arsenic	<u>S</u>	Method 108	<u>\$393</u>
		Method 108A	\$393
		Method 108B	\$393
		Method 108C	\$393
Beryllium	<u>S</u>	Method 103	\$393
		Method 104	\$393
Mercury	<u>S</u>	Method 101	\$393
		Method 101A	\$393
		Method 102	\$393
		Method 105	\$393
Polonium 210	<u>S</u>	Method 111	\$393
Vinyl Chloride	<u>S</u>	Method 106	\$393
		Method 107	\$393
		Method 107A	\$393
SECTION E. METH	IODS DIRECTOR A	PPROVED UNDER R9-	14-610(C)
Description	Reference	Method/s	Fee Per Method
Chromatographic Method	=	Any	\$116
Mass Spectrometric Method	=	Any	\$152
Toxicity Method	=	Any	\$194
Other Method	=	Any	<u>\$75</u>

Table 2. <u>Instrumentation Fees</u>

Description	Subtype, if any	Fee Per Instrument
Atomic Absorption	Cold Vapor	<u>\$76</u>
	Flame Burner	<u>\$76</u>
	Graphite Furnace	<u>\$76</u>
	Hydride Generator	<u>\$76</u>
	<u>Other</u>	<u>\$76</u>
Counters for Radioactivity	=	<u>\$76</u>

Gas Chromatograph	Electron Capture	<u>\$76</u>
	Flame Ionization	<u>\$76</u>
	Flame Photometric	<u>\$76</u>
	Halide Specific	<u>\$76</u>
	Nitrogen/Phosphorus	<u>\$76</u>
	Photoionization	<u>\$76</u>
	<u>Other</u>	<u>\$76</u>
Gas Chromatograph/Mass Spectrometer	High Resolution	\$194
	Other than High Resolution	\$152
High Pressure Liquid Chromatograph	Ultraviolet	<u>\$76</u>
	Fluorescence	<u>\$76</u>
	<u>Other</u>	<u>\$76</u>
High Pressure Liquid Chromatograph/Mass Spectrometer	=	<u>\$152</u>
Inductively Coupled Plasma	=	<u>\$76</u>
Inductively Coupled Plasma/Mass Spectrometer	=	\$152
Ion Chromatograph	=	<u>\$76</u>
Automated Autoanalyzer	=	<u>\$76</u>
Mercury Analyzer	=	<u>\$76</u>
Organic Halide, Total	=	<u>\$76</u>
Transmission Electron Microscope	=	\$396
X-Ray Diffraction Unit	=	<u>\$76</u>

EXHIBIT II. ALTERNATE DEFAULT LIMITS

Default Limits Table 1.

QUALITY CONTROL PARAMETERS WITHOUT ACCEPTANCE CRITERIA SPECIFIED IN THE METHOD	<u>DEFAULT LIMITS</u>
Matrix Spike/LFM (processed or non-processed)	<u>LCS/LFB</u>
LCS/LFB (processed or non-processed)/Second source reference standard	CCV/continuing IPC
LOQ/MRL (non-processed)	CCV/continuing IPC or ± 50%
LOQ/MRL (processed)	$LCS/LFB \text{ or } \pm 50\%$
QCS (non-processed)	ICV/continuing IPC/manufacturer's limits
QCS (processed)	LCS/LFB/manufacturer's limits
IDOC limits	LFB/LCS

Notices of Final Rulemaking

LFB/LCS/LFM/duplicate RPD	IDOC limits/≤20%
Non-CCC compounds	CCC limits
ICV/CCV	±10%

- A. For 8000 methods that do not specify the QC limits for Matrix Spike/LCS, a licensee may use the default limit of $\pm 30\%$.
- **B.** For 500, 600, 1600, and 8000 series methods that do not specify surrogates or acceptance limits for surrogates, a licensee may use the default limits of 70-130%.
- C. For 500, 600, 1600, and 8000 series methods that do not specify internal standards or acceptance limits for internal standards, a licensee may use the default limits of 70-130%.
- **D.** For methods that do not list a precision measurement, a licensee may use 20% RPD.
- **E.** For methods that do not specify the LOQ/MRL, a licensee may use the default limit of \pm 50%.

NOTICE OF FINAL RULEMAKING

TITLE 15. REVENUE

CHAPTER 3. DEPARTMENT OF REVENUE LUXURY TAX SECTION

[R06-476]

PREAMBLE

1. Section Affected

Rulemaking Action

R15-3-303 New Section

2. The specific statutory authority for the rulemaking, including both the authorizing statutes (general) and the implementing statute (specific):

Authorizing statutes: A.R.S. §§ 42-1005, 42-3004 Implementing statutes: A.R.S. §§ 42-3202, 42-3208

3. The effective date of the rule:

December 5, 2006

Because the statutory amendments clarified by the rule become effective on October 1, 2006 (see Paragraph 6 *infra*) and the Department believes that the rule will benefit the public by greatly reducing confusion among affected tax-payers that might otherwise occur in seeking to comply with luxury tax payment, the Department requests an immediate effective date. A penalty is not associated with a violation of this rule.

4. A list of all previous notices appearing in the Register addressing the final rule:

Notice of Rulemaking Docket Opening: 12 A.A.R. 2849 (August 11, 2006)

Notice of Proposed Rulemaking: 12 A.A.R. 2807 (August 11, 2006)

5. The name and address of agency personnel with whom persons may communicate regarding the rulemaking:

Name: Hsin Pai, Tax Analyst

Address: Tax Policy and Research Division

Arizona Department of Revenue 1600 W. Monroe, Rm. 810

Phoenix, AZ 85007

Telephone: (602) 716-6851
Fax: (602) 716-7995
E-mail: hpai@azdor.gov

Please visit the ADOR web site to track the progress of these rules and other agency rulemaking matters at www.azdor.gov/ResearchStats/Proposedrulesmainmenu.htm.

6. An explanation of the rule, including the agency's reasons for initiating the rulemaking:

Notices of Final Rulemaking

A.R.S. § 42-3202 requires payment of Arizona luxury tax on "tobacco, cigarettes or cigars" subject to the tax, as evidenced by a stamp or any other official indicia. Moreover, Laws 2006, ch. 278, § 15 requires that the tax be paid "at the time of the sale, distribution or transfer" of the tobacco products. A.R.S. § 42-3208 provides the specific procedure under which distributors of tobacco products other than cigarettes (defined as "other tobacco products" in A.A.C. R15-3-201) are to report and remit luxury tax. This rulemaking clarifies that, for purposes of other tobacco products, luxury tax continues to be remitted to the Department by return, as provided in A.R.S. § 42-3208, and shall be considered paid at the time of sale, distribution, or transfer on products sold or offered for sale in Arizona if tax returns are remitted with the tax on the date required for timely payment.

7. A reference to any study relevant to the rule that the agency reviewed and either relied on or did not rely on in its evaluation of or justification for the rule, where the public may obtain or review each study, all data underlying each study, and any analysis of each study and other supporting material:

None

8. A showing of good cause why the rule is necessary to promote a statewide interest if the rule will diminish a previous grant of authority of a political subdivision of this state:

Not applicable

<u>9.</u> A summary of the economic, small business, and consumer impact:

This rulemaking is necessary to provide clear and understandable guidance to taxpayers to enable compliance with Arizona luxury tax laws, and is expected to benefit tobacco product distributors.

10. A description of the changes between the proposed rule, including supplemental notices, and the final rule:

None

11. A summary of the comments made regarding the rule and the agency response to them:

No comments were received regarding the rule.

12. Any other matters prescribed by statute that are applicable to the specific agency or to any specific rule or class of rules:

None

13. Any material incorporated by reference and its location in the rule:

None

14. Was this rule previously made as an emergency rule?

No

15. The full text of the rule follows:

TITLE 15. REVENUE

CHAPTER 3. DEPARTMENT OF REVENUE LUXURY TAX SECTION

ARTICLE 3. TOBACCO

Section

R15-3-303. Repealed Luxury Tax on Other Tobacco Products

ARTICLE 3. TOBACCO

R15-3-303. Repealed Luxury Tax on Other Tobacco Products

The Department shall consider Arizona luxury tax paid at the time of the sale, distribution, or transfer of other tobacco products if distributors report and remit the tax on the products in accordance with the manner, method, and time prescribed by A.R.S. § 42-3208. Sworn returns prepared and remitted by distributors pursuant to A.R.S. § 42-3208 constitute official indicia that luxury tax has been paid on the other tobacco products.